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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA**

Gene Neal and Kennieth Neal,
individuals,

Plaintiffs,

vs.

Vince Au (aka Vinh Cam Au), an
individual dba Innovative Performance
Research, and Innovative Performance
Research, LLC, a California limited
liability company,

Defendants.

No. 2:13-cv-00406-JWS

**PLAINTIFFS' OPENING
MARKMAN BRIEF**

(Assigned to the Honorable
John W. Sedwick)

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Exhibit B	U.S. Patent 8,505,512 (the ‘512 Patent)
Exhibit C	Plaintiffs’ Proposed Claim Constructions (‘917 Patent)
Exhibit D	Defendants’ Proposed Claim Constructions (‘917 Patent)
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Exhibit F	Defendants’ Proposed Claim Constructions (‘512 Patent)
Exhibit G	Affidavit of Plaintiff Kennieth Neal
Exhibit H	U.S. Department of Energy Tribal Energy Program Glossary of Terms

1 **I. INTRODUCTION**

2 Pursuant to the parties' agreement memorialized in the Rule 26 Scheduling
3 Conference Report, Plaintiffs Kennieth Neal and Gene Neal have exchanged proposed claim
4 constructions with Defendants Vince Au and Innovative Performance Research, LLC for the
5 asserted claims of U.S. Patent 8,375, 917 (the "'917 Patent," attached hereto as Exhibit A)
6 and U.S. Patent 8,505,512 (the "'512 Patent," attached hereto as Exhibit B).

7 Plaintiffs initially proposed that only one claim term of the '917 Patent needed
8 construction, namely the term "air-to-liquid heat exchanger." Conversely, Defendants
9 proposed 19 claim terms for construction for claim 1 alone.

10 Similarly, Plaintiffs proposed that only one claim term of the '512 Patent needed
11 construction, namely "mounting a remote oil cooling heat exchanger in a location distal from
12 the location of the original equipment liquid-to-liquid heat exchanger." Defendants proposed
13 that an *additional* 18 claim terms required construction.¹

14 It is well-settled that the purpose of claim construction is to provide guidance to the
15 jury or other fact-finder as to the meaning of patent claim terms that the jury would not
16 otherwise be capable of understanding. *Sulzer Textile A.G. v. Picanol N.V.*, 358 F.3d 1356
17 (Fed. Cir. 2004). Claim construction is necessary, for example, if a claim uses a term that is
18 not familiar to those outside of the technical field of the invention, or because the patentee
19 used a word idiosyncratically, in contradiction to its ordinary meaning. *Phillips v. AWH*
20 *Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005)

21 As discussed more fully herein, Defendants are *not* using the claim construction
22 process to provide guidance to the jury or other fact-finder as to the meaning of technical
23 terms in the patents or words that are used idiosyncratically in contradiction to their ordinary
24

25 ¹ See the Parties' proposed claim interpretations, attached hereto as Exhibits C to F.
26

1 meaning. Instead, Defendants are using the claim construction process for the improper
2 purpose of imposing limitations on claim terms that are already easily understandable.

3 Plaintiffs believe that the ‘917 and ‘512 Patent claims do not contain technical terms
4 that would be incomprehensible to a lay juror. Neither do the claims contain words that are
5 used idiosyncratically in contradiction to their ordinary meaning. Accordingly, Plaintiffs
6 believe that there is little, if any, need for clarifying explanations as to the meaning of the
7 claim terms. If any construction is required, the claims should simply be read in accordance
8 with their plain and ordinary meaning.

9 Even though Defendants have identified 37 claim terms for construction, Defendants
10 have provided virtually *no* clarifying explanations of technical terms, *i.e.*, explanations that
11 would have justified identifying the 37 claim terms as requiring construction in the first
12 place. Not surprisingly, instead of providing clarifying explanations, Defendants are using
13 this opportunity to suggest extraneous limitations be added to what are otherwise plain and
14 ordinary words. For example, Defendants have suggested that the term “a diesel engine” is a
15 term that requires construction. Defendants then suggest that “a diesel engine” means “a
16 6.0L International® VT365 diesel engine also known as the 6.0L Ford® Powerstroke diesel
17 engine.” If Defendants truly believed that the meaning of “a diesel engine” would not be
18 readily apparent to a juror and, therefore, required construction, why would Defendants use
19 the term “diesel engine” *twice* in their purported construction?

20 Plaintiffs regret the need to present the Court with a long and detailed discussion of
21 claim terms that do not require construction. Virtually all of the claim terms Defendants want
22 construed are unambiguous, are easily understood by a lay juror, and lack any technical
23 terms or words that are used idiosyncratically in contradiction to their ordinary meaning.
24 Instead of providing clarity to the claim terms, Defendants are using this *Markman*

1 proceeding as an opportunity to alter the plain meaning of the claims, improperly narrowing
2 the scope of the claims so that the claims no longer read on their infringing products.

3 Plaintiffs believe no construction is needed for most of the claim terms. To the extent
4 the Court believe the terms need construction, Plaintiffs have offered the Court a plain and
5 ordinary meaning for the terms. This is in stark contrast to Defendants' purported
6 constructions, each of which violates the "cardinal rule" of claim construction by adding
7 limitations to the claims that are not required by the claim language itself and are not helpful
8 to a lay juror.

9 **II. TECHNICAL BACKGROUND**

10 In 2003, Ford Motor Company introduced a new engine into its lineup of F-Series
11 Super Duty trucks. This engine was known as the 6.0L Power Stroke® VT365 diesel engine
12 (the "VT365 Engine"). At the time of its introduction, the VT365 Engine was a highly
13 advanced engine having improved fuel efficiency and significantly lower emissions than its
14 predecessor. For all its advancements, however, the VT365 Engine had a significant flaw
15 with its engine oil cooler. (Affidavit of Kennieth Neal, attached hereto as Exhibit G, ¶ 2)

16 An engine oil cooler is necessary in many engines to keep the engine oil below a
17 specific temperature, typically about 200°-220°F. (Exhibit A, '917 Patent, Col. 1, ll. 45-48)
18 As engine oil temperature increases, the oil will undergo thermal degradation. Thermal
19 degradation reduces the oil viscosity (the oil becomes thinner). As the oil becomes thinner,
20 the oil is not as capable of lubricating the engine, which increases engine wear and the heat
21 generated by friction in the engine. Severely overheated oil can even lead to catastrophic
22 engine failure. (Exhibit G, ¶ 3)

1 A heat exchanger is a device used to transfer heat from a fluid (liquid or gas) to
2 another fluid (liquid or gas) where the two fluids are physically separated. (Exhibit G, ¶ 4)²
3 The heat exchanger most commonly found on a diesel-powered vehicle is the vehicle's
4 radiator. In the radiator, hot engine coolant (usually a mixture of water and anti-freeze) is
5 circulated through a series of tubes with fins attached so that heat from the coolant is
6 transferred to the surrounding air. The radiator fins increase the heated surface area that is in
7 contact with the air so that more heat can be transferred from the coolant to the air. The
8 engine-cooling fan also assists the transfer of heat by forcing air past each radiator fin.
9 Because of its tubes and fins construction, in engineering terms an automobile radiator is
10 known as a "tube-and-fin" heat exchanger. A vehicle radiator operating in air dissipates heat
11 from a heated fluid directly to the air. Therefore, a vehicle radiator operates as a "liquid-to-
12 air" (or "air-to-liquid") heat exchanger. (Exhibit G, ¶ 4)³

13 In many vehicles, the engine oil cooler is similar in construction to the vehicle
14 radiator, *i.e.*, the oil cooler is also a "tube-and-fin" heat exchanger. Hot oil flows through a
15 series of tubes with fins attached so that heat from the oil is dissipated directly to the air
16 surrounding the oil cooler. Because in this type of oil cooler heat is transferred from the hot
17 oil directly to the air, this type of oil cooler also operates as a "liquid-to-air" heat exchanger.
18 (Exhibit G, ¶ 5)

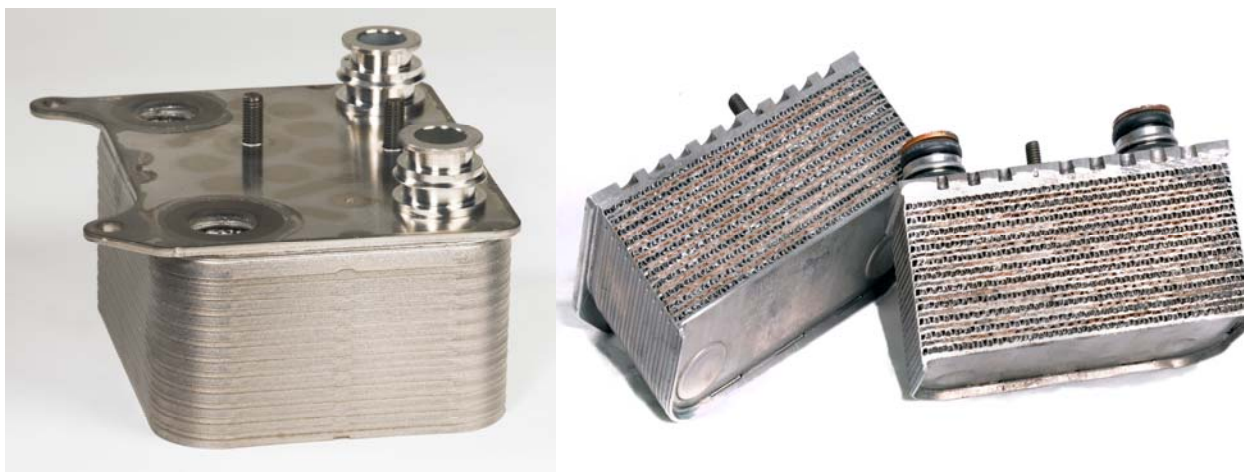
19 The oil cooler supplied with a new VT365 Engine, referred to as an Original
20 Equipment ("OE") engine oil cooler, was of a different construction known as a "parallel-
21

22 ² See also excerpts from the U.S. Department of Energy Definitions attached hereto as Exhibit
23 H, defining Heat Exchanger as "A device used to transfer heat from a fluid (liquid or gas) to
another fluid where the two fluids are physically separated."

24 ³ See also Exhibit H, wherein the U.S. Department of Energy defines a "Liquid-to-Air" heat
25 exchanger as "a heat exchanger that transfers the heat contained in a liquid heat transfer fluid
to air."

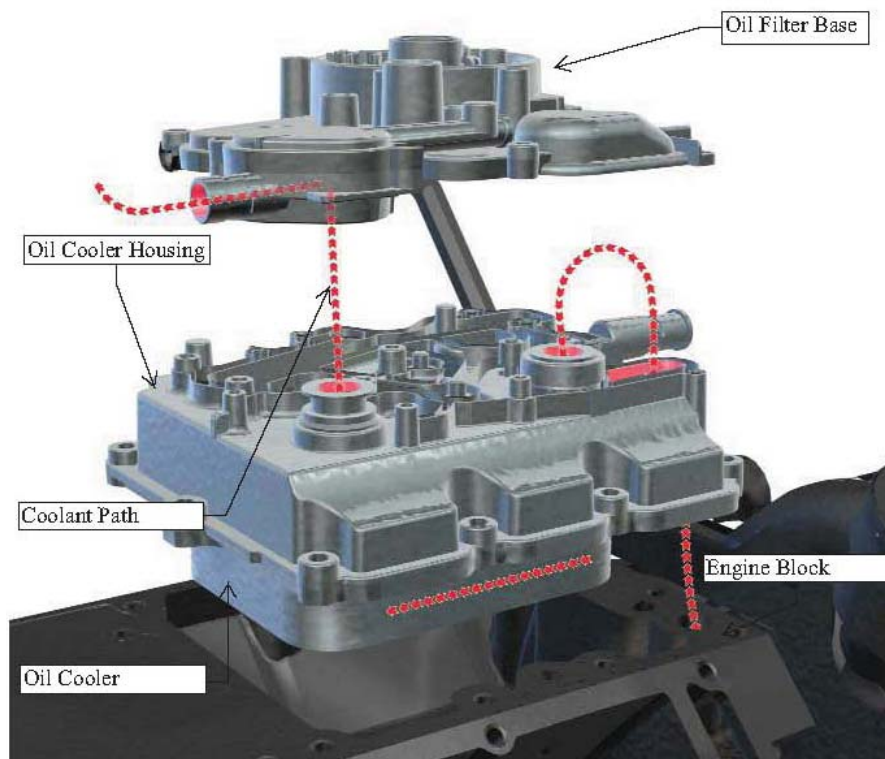
1 plate” heat exchanger. In a parallel plate oil cooling heat exchanger, hot oil does not pass
2 through a series of tubes with fins exposed to cool air. Instead, the engine oil passes through
3 a series of narrow passageways while engine coolant circulates through a series of adjacent
4 passageways. The oil and coolant passageways are separated by thin plates that allow the
5 heat from the engine oil to be transferred to the engine coolant, hence the name “parallel-
6 plate” heat exchanger. (Exhibit G, ¶ 6)

7 A photograph of the OE Oil Cooler (parallel-plate design) is shown below, along with
8 a cross-section image of the unit. (Exhibit G, ¶ 7)



17 *Ford 6.0L Power Stroke Engine Original Equipment “parallel plate” heat exchanger.*

18 One advantage of a “parallel-plate” heat exchanger is that it is very compact. This is
19 because there is no need for bulky radiator fins if both the heated fluid and the coolant are
20 liquids. Using a compact parallel-plate design for the oil cooler enabled Ford to bury the OE
21 Oil Cooler deep inside the VT365 Engine, as shown in the drawing below, which was copied
22 from the Ford manual for the VT365 Engine with annotations added. (Exhibit G, ¶ 8)



Drawing of VT365 Engine courtesy of Ford Motor Company.

Because the OE Oil Cooler is mounted deep within the engine, virtually all of the heat that is dissipated from the oil is transferred to the engine coolant. Therefore, in its original operating environment, the OE engine oil cooler operates strictly as a liquid-to-liquid heat exchanger because the dissipated heat from the oil (a liquid) is transferred *only* to the engine coolant (another liquid). (Exhibit G, ¶ 9)⁴

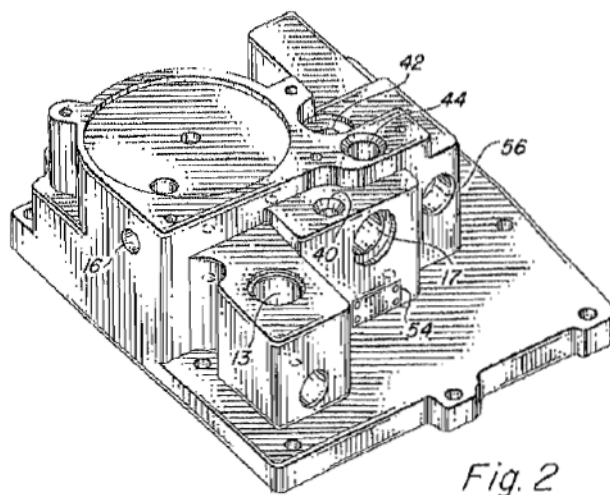
The critical flaw in the OE Oil Cooler is that the passageways in the oil cooler are so small that they trap dirt particles that are suspended in the engine coolant. The accumulation of dirt eventually blocks the coolant channels. Once this happens, the engine oil will

⁴ See also Exhibit H, wherein a “Liquid-to-Liquid” heat exchanger is defined by the Department of Energy as “a heat exchanger that transfers heat contained in a liquid heat transfer fluid to another liquid.”

1 overheat, leading to numerous problems, including the possibility of crankshaft failure and
2 fuel injector failures. (Exhibit G, ¶ 10) Moreover, because the engine coolant is supposed to
3 flow from the engine oil cooler to a cooled exhaust gas recirculation (EGR) system, a
4 plugged engine oil cooler will cut off the flow of coolant to the EGR cooler, leading to
5 failure of the EGR cooler. (Id.)

6 **III. SUMMARY OF THE PATENTS-IN-SUIT**

7 Plaintiffs are the co-inventors of the '917 Patent and the '512 Patent (collectively, the
8 "Patents-in-Suit"). The Patents-in-Suit generally relate to a device ('917 Patent) and method
9 ('512 Patent) of cooling hot engine oil in a VT365 or similar engine by using an external oil
10 cooler. The cooler is mounted remotely from the engine block. A manifold/housing
11 identified in the Patents-in-Suit mounts to the engine in place of the original oil cooler
12 housing. High-pressure hoses lead the engine oil from the manifold to the remote oil cooler
13 and back. An image of the manifold from the Patents-in-Suit is shown below.



Manifold as shown in Fig. 2 of the '917 Patent and '512 Patent.

1 Since July 2009, the manifold, in combination with an external oil cooler, external oil
2 filter, brackets and hoses (as shown below) has been sold commercially by a company
3 owned by Plaintiffs as the “Bulletproof Diesel®” oil cooler relocation kit. Plaintiffs’ oil
4 cooler kit has demonstrated great commercial success. (Exhibit G, ¶ 11)



Bulletproof Diesel® oil cooler relocation kit.

A. The ‘917 Patent Claims

The ‘917 Patent contains only one independent claim, which is claim 1:

1. An oil cooling system for 6.0 L VT365 diesel engine having an engine block with an engine oil supply inlet, an engine coolant water outlet, an engine oil supply outlet located in a horizontal plane, an oil pump, and a water cooling system with a water pump, the engine having an original equipment liquid-to-liquid heat exchanger in which heat from the oil is transferred to the water cooling system, the original equipment liquid-to-liquid heat exchanger having a predetermined mounting configuration, the original equipment liquid-to-liquid heat exchanger further comprising an oil inlet, an oil outlet, a water inlet, and a water outlet each in a predetermined location, said oil cooling system comprising:

(a) a manifold having a housing, said housing having an oil inlet port for receiving a flow of oil from the engine oil supply outlet, the housing further

1 comprising an oil outlet port, the housing being sized and shaped to match the
2 mounting configuration of the original equipment liquid-to-liquid heat
3 exchanger, the housing further being configured to position said oil inlet port
4 in a horizontal plane adjacent the engine oil supply outlet of the engine block at
5 the location of the oil inlet of the original equipment liquid-to-liquid heat
exchanger whereby the manifold is capable of receiving the flow of oil from
the engine oil pump without leakage;

6 (b) a first oil filter receiving a flow of oil from the outlet port of the
7 manifold;

8 (c) an air-to-liquid heat exchanger having heat exchanger elements
9 positioned in an airflow, the air-to-liquid heat exchanger receiving a flow of oil
10 from said manifold and cooling the oil by transferring heat to air flowing past
11 the air-to-liquid heat exchanger, the air-to-liquid heat exchanger having a
discharge directed to the engine oil supply inlet via a passageway in said
manifold;

12 (d) the housing further comprising an un-branched bypass water passage
13 having a water inlet port and a water outlet port, the housing further configured
14 to position the water inlet port adjacent engine coolant water outlet of the
15 engine block at the location of the water inlet of the original equipment liquid-
16 to-liquid heat exchanger and to position the manifold water outlet port so that
17 water is discharged directly to the water cooling system of the engine, whereby
18 the housing receives a flow of water from the engine without leakage and
conveys the entirety of the flow of water exiting the engine from the engine
water coolant outlet directly back into to the water cooling system of the
engine without passing through an oil cooling or water cooling heat
exchanger.⁵

19 (Exhibit A, Col. 6, ll. 5-65)

20 The remaining asserted claims of the '917 Patent (claims 4, 8 and 10) are dependent
21 claims that include additional limitations, namely: that the oil filter is a cartridge-type oil
22
23

24
25 ⁵ Element (d) is repeated twice in the printed patent due to a printing error by the USPTO. A
26 certificate of correction has been filed.

1 filter (claim 4); that the oil filter has a replaceable element (claim 8); and that there is a check
2 valve located between the oil outlet port and the oil filter (claim 10).

3 **B. The '512 Patent Claims**

4 The '512 Patent contains one independent claim, which is Claim 1:

5 1. A method of modifying an oil cooling system for a vehicle having a diesel
6 engine, the diesel engine having an engine block with an engine oil supply
7 inlet, an engine water coolant outlet, an engine oil supply outlet located in a
8 horizontal plane, an oil pump, and a water cooling system with a water pump,
9 the engine having an original equipment liquid-to-liquid heat exchanger in
10 which heat from the oil is transferred to the water cooling system, the original
11 equipment liquid-to-liquid heat exchanger having a predetermined mounting
configuration, the original equipment liquid-to-liquid heat exchanger further
comprising an oil inlet, an oil outlet, a water inlet, and a water outlet each in a
predetermined location, the method comprising:

12 (a) removing the original equipment liquid-to-liquid heat exchanger
13 from the engine block;

14 (b) attaching a manifold to the engine block, said manifold having an oil
15 inlet port for receiving a flow of oil from the engine oil supply outlet, the
16 manifold further comprising an oil outlet port, the manifold being sized and
17 shaped to match the mounting configuration of the original equipment liquid-
18 to-liquid heat exchanger, the manifold further being configured to position said
19 oil inlet port in a horizontal plane adjacent the engine oil supply outlet of the
engine block at the location of the oil inlet of the original equipment liquid-to-
liquid heat exchanger whereby the manifold is capable of receiving the flow of
oil from the engine oil pump without leakage;

20 (c) mounting a remote oil cooling heat exchanger in a location distal
21 from the location of the original equipment liquid-to-liquid heat exchanger, the
22 remote oil cooling heat exchanger receiving a flow of oil from said manifold
23 and cooling the flow of oil prior to returning the flow of oil to the engine oil
supply, the flow of oil being returned to the engine from the remote oil cooling
heat exchanger via a passageway in said manifold;

24 (d) the manifold further comprising a water passage providing an un-
25 branched flow of water, the water passage having a water inlet port and a water
26 outlet port, the manifold being configured to position the water inlet port

1 adjacent the engine water coolant outlet of the engine block at the location of
2 the water inlet of the original equipment liquid-to-liquid heat exchanger, the
3 manifold further being configured to position the manifold water outlet port so
4 that the entirety of the flow of water in the bypass water passage is discharged
back to the water cooling system of the engine without passing through an oil
cooling or water cooling heat exchanger

5 (Exhibit B, Col. 6, ll. 2-48)

6 The remaining asserted claims of the '512 Patent (claims 2, 3, 4, 9, and 10) are
7 dependent claims that include additional limitations, namely: that the remote heat exchanger
8 is mounted proximal the front of the vehicle (claim 2); that the remote heat exchanger is
9 mounted proximal the vehicle radiator (claim 3); that the remote heat exchanger is an air-to-
10 liquid heat exchanger (claim 4); that an oil filter is mounted to receive a flow of oil from the
11 outlet port of the manifold (claim 9); and that the oil filter discharges the flow of oil into the
12 remote heat exchanger (claim 10).

13 **IV. THE LAW OF CLAIM CONSTRUCTION**

14 Claim construction is purely a matter of law. *Markman v. Westview Instruments, Inc.*,
15 52 F.3d 967, 979 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370, 371 (1996). It is a
16 “bedrock principle” of patent law that the claims of a patent define the invention. *Phillips v.*
17 *AWH Corp.*, 415 F.3d 1303, 1314-17 (Fed. Cir. 2005) (*en banc*), *cert. denied*, 546 U.S. 1170
18 (2006); *see also Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)
19 (“we look to the words of the claims themselves ... to define the scope of the patented
20 invention”). Claim construction analysis therefore *begins and ends* with the language of the
21 claims. The purpose of claim construction is to provide clear guidance to the jury or other
22 fact-finder as to the meaning of the patent claims. *Sulzer Textile A.G. v. Picanol N.V.*, 358
23 F.3d 1356, 1366 (Fed. Cir. 2004).

1 However, the District Court is not required to interpret every proffered claim term for
2 interpretation. *See, e.g., Biotec Biologische Naturverpackungen GmbH & Co. KG v.*
3 *Biocorp, Inc.*, 249 F.3d 1341, 1349 (Fed. Cir. 2001) (deciding that the disputed issue was
4 actually the proper application of a claim term to an accused process and not the scope of the
5 term); *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (claim
6 construction “is not an obligatory exercise in redundancy.”). Instead, claim construction is a
7 matter of resolution of disputed meanings and technical scope, to clarify and when necessary
8 to explain what the patentee covered by the claims, for later use in the determination of
9 infringement. *U.S. Surgical*, 103 F.3d at 1568.

10 Not only is a District Court not *required* to interpret every proffered claim term, the
11 Court is actually *prohibited* from interpreting claim terms beyond the extent necessary to
12 resolve the controversy, because to do so would be to render a prohibited advisory opinion.
13 *Vivid Technologies, Inc., v. American Science & Engineering, Inc.*, 200 F.3d 795, 803 (Fed.
14 Cir. 1999); *U.S. Surgical Corp.*, 103 F.3d at 1568.

15 **A. Intrinsic Evidence**

16 Claim construction should always start with the intrinsic evidence because it is “the
17 most significant source of the legally operative meaning of disputed claim language.”
18 *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Intrinsic sources
19 include the claims, specification, and the prosecution history. *Id.*; *Markman*, 52 F.3d at 979.
20 To begin with, the court looks at: (1) the words of the claims themselves; (2) the
21 specification, of which the claims are a part; and (3) the prosecution history, which provides
22 evidence of how the U.S. Patent Office and the inventor understood the patent. *Phillips*, 415
23 F.3d at 1314-17.

1 1. **The Claims**

2 Claim construction begins with the words of the claim. *Phillips*, 415 F.3d at 1312. “In
3 construing claims, the analytical focus must begin and remain centered on the language of
4 the claims themselves, for it is that language that the patentee chose to use to ‘particularly
5 point [...] out and distinctly claim [...] the subject matter which the patentee regards as his
6 invention.’” *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331 (Fed.
7 Cir. 2001).

8 The words used in the claims are examined from the perspective of a person of
9 ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1313. In the absence
10 of an express intent to impart a novel meaning to claim terms, the words are presumed to
11 take on their ordinary and customary meanings. *Id.* at 1313, 1316; *Vitronics*, 90 F.3d at 1582.

12 Plaintiffs submit that a person of ordinary skill in the art would be an individual
13 familiar with vehicle engines and knowledgeable about engine operation, maintenance and
14 repair; and therefore would be intimately familiar with the language found in the claims,
15 such as “manifold,” “heat exchanger,” “oil outlet port,” and the like.

16 2. **The Specification**

17 In this case, virtually all of the claim terms would be understood by a person of
18 ordinary skill in the art at the time of the patent’s filing. Therefore, the claims should require
19 no construction at all, or if construed, should be construed according to their plain and
20 ordinary meaning.

21 *Only where the meaning of a claim is not readily apparent*, for example, because a
22 claim term is not in common usage among those not skilled in the art, or because the
23 patentee used a word idiosyncratically, should the Court refer to the specification for claim
24 construction. In such cases the specification is “the single best guide to the meaning of a
25 disputed term.” *Phillips*, 415 F.3d at 1315 (citation omitted); *see also MBO Labs., Inc. v.*

1 *Becton, Dickinson & Co.*, 474 F.3d 1323, 1329 (Fed. Cir. 2007). Patent claims “must be
2 read in view of the specification, of which they are a part.” *Markman*, 52 F.3d at 979; *see*
3 *also SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985).

4 3. **Prosecution History**

5 When construing the language of a claim, the prosecution history is also considered,
6 although “it often lacks the clarity of the specification and thus is less useful for claim
7 construction purposes.” *Phillips*, 415 F.3d at 1317. The prosecution history cannot
8 “‘enlarge, diminish, or vary’ the limitations in the claims,” but should be utilized to interpret
9 the claims. *Markman*, 52 F.3d at 980.

10 B. **Extrinsic Evidence**

11 Extrinsic evidence is “all evidence external to the patent and prosecution history,
12 including expert and inventor testimony, dictionaries, and learned treatises.” *Markman*, 52
13 F.3d at 980. “[E]xtrinsic evidence may be useful to the court, but it is unlikely to result in a
14 reliable interpretation of patent claim scope unless considered in the context of the intrinsic
15 evidence.” *Phillips*, 415 F.3d at 1319. Extrinsic evidence, such as expert testimony, is to be
16 disregarded by the court if it varies a meaning manifested by the claims, specification and
17 prosecution history. *Markman*, 52 F.3d at 981.⁶

18 C. **Reading Limitations Into the Claims Is Improper**

19 The “cardinal rule” of claim construction is that it is error to import narrowing
20 limitations from the specification into the claims. *See Teleflex, Inc. v. Ficosa North America*
21

22 ⁶ Similarly, a court may consult a dictionary or technical treatise to better understand the
23 patented technology or the meaning of technical terms, but use of a dictionary is appropriate
24 only so long as the resulting definition “does not contradict any definition found in or
25 ascertained by a reading of the patent documents.” *Phillips*, 415 F.3d at 1322-23.

1 *Corp.*, 299 F.3d 1313, 1324 (Fed. Cir. 2002) Yet, that is precisely what Defendants
2 systematically attempt to do in virtually every one of the 37 claim terms they seek to have
3 construed. In doing so, Defendants attempt to impart different meanings to words that were
4 used in their ordinary sense. The Federal Circuit has repeatedly warned against this,
5 cautioning that the words of a claim “are generally given their ordinary and customary
6 meaning.” *Phillips* 415 F.3d at 1312. If the ordinary meaning of claim language is readily
7 apparent to a lay judge, claim construction involves little more than the application of the
8 widely accepted meaning of commonly understood words. *Phillips*, 415 F.3d at 1314.

9 **Only in cases where the meaning of a claim is not readily apparent, for example**
10 **because a claim term is not in common usage among those not skilled in the art, or**
11 **because the patentee used a word idiosyncratically, must the court resort to other**
12 **sources.** These other sources including “the remainder of the specification, the prosecution
13 history, and extrinsic evidence concerning relevant scientific principles, the meaning of
14 technical terms, and the state of the art. *Phillips*, 415 F.3d at 1314 *citing Innova/Pure*
15 *Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004).

16 The Federal Circuit has consistently stated that, “although the specification may well
17 indicate that certain embodiments are preferred, particular embodiments appearing in a
18 specification will not be read into the claims when the claim language is broader than such
19 embodiments.” *Electro Medical Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054
20 (Fed. Cir. 1994); *see also Electro Sci. Indus., Inc. v. Dynamic Details, Inc.*, 307 F.3d 1343,
21 1349 (Fed. Cir. 2002) (emphasis added).

22 The case of *Teleflex, Inc. v. Ficosa North America Corp.*, 299 F.3d 1313 (Fed. Cir.
23 2002) is particularly instructive. In *Teleflex*, the patent specification disclosed an assembly
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1 that was held together with a clip that had a single pair of legs.⁷ The claim, however, recited
2 only “a clip.” The parties disputed the interpretation of the word “clip” and ultimately the
3 District court instructed the jury that “clip” meant a structure that had *a single pair of legs*
4 that served the function of holding the assembly together. This was held to be reversible
5 error. In its opinion, the Federal Circuit noted:

6 In this case, nothing in the intrinsic evidence indicates that “clip (28)” should
7 be limited to “a single pair of legs.” The language of asserted claim 1 does not
8 support limiting the claim to a “single pair of legs.” Neither “single” nor “pair
9 of legs” appears in claim 1. Neither the specification nor the prosecution
10 history includes an expression of manifest exclusion or restriction
11 demonstrating an intent to limit “clip (28)” to a single pair of legs. The term
12 “clip” is not defined in the specification or in the prosecution history, and
13 although the specification describes only one embodiment of the clip, no “clear
14 statements of scope” limit the term “clip” to having a “single pair of legs.”
15 Furthermore, the ordinary meaning of “clip” is not restricted to having a
16 “single pair of legs.” ... The district court thus erred by importing the “single
17 pair of legs” limitation from the specification into the claim. Instead of using
18 the specification as context, the district court apparently limited the “clip (28)”
19 recited in claim 1 to the embodiment described in the specification. We have
20 “cautioned against limiting the claimed invention to preferred embodiments or
21 specific examples in the specification.” The specification describes only one
22 embodiment of the claimed “clip (28),” but in the circumstances of this case
23 the record is devoid of “clear statements of scope” limiting the term appearing
24 in claim 1 to having “a single pair of legs.” Absent such clear statements of
25 scope, we are constrained to follow the language of the claims, rather than that
26 of the written description.

19 *Teleflex* 299 F.3d at 1313 (internal citations omitted).

20 To the extent there remained any questions about whether it is proper to incorporate
21 limitations into claims, the Federal Circuit laid them to rest in an *en banc* decision:

22 [A]lthough the specification often describes very specific embodiments of the
23 invention, we have repeatedly warned against confining the claims to those
24 embodiments. In particular, we have expressly rejected the contention that if a

25 ⁷ The clip was designated as reference number (28) and thus was referred to as “clip (28).”
26

1 patent describes only a single embodiment, the claims of the patent must be
2 construed as being limited to that embodiment. That is not just because section
3 112 of the Patent Act requires that the claims themselves set forth the limits of
4 the patent grant, but also because persons of ordinary skill in the art rarely
would confine their definitions of terms to the exact representations depicted in
the embodiments.

5 *Phillips*, 415 F.3d at 1323 (citations and quotations omitted); *see also MBO Labs.*, 474 F.3d
6 at 1333-34.

7 **V. CLAIM CONSTRUCTIONS**

8 Plaintiffs present their proposed plain and ordinary meaning constructions for each of
9 the disputed terms below. Plaintiffs will briefly address Defendants’ proposed constructions,
10 but reserve the right to respond in more detail in their Response Brief. In short, virtually all
11 of Defendants’ proposed claim interpretations violate the cardinal rule of claim construction
12 by importing limitations into the claim language that are not required by the claim language
13 itself. In order to clarify this issue for the Court, Plaintiffs have underlined in Defendants’
14 Constructions the limitations that Defendants have improperly imported from the
15 specification, or in some instances, out of thin air.

16 **A. ‘917 Patent Proposed Constructions – Claim 1**

17 1. “an oil cooling system”

18 Plaintiffs’ Construction	19 Defendants’ Construction
20 (1) No construction needed; 21 (2) Plain and ordinary meaning (<i>i.e.</i> , a system 22 for cooling hot oil).	23 “a system for cooling <u>engine oil in which</u> 24 <u>the original equipment manufacturer</u> 25 <u>(OEM) engine-mounted liquid-to-oil heat</u> 26 <u>exchanger is replaced with an non-OEM</u> <u>air-to-liquid heat exchanger”</u>

24 A person of ordinary skill in the art would understand “an oil cooling system” to be a
25 system for cooling hot oil. No claim construction is required.

1 Defendants' proposed construction invites the Court to commit error by importing
2 numerous limitations from the specification into the claim. Defendants improperly seek to
3 limit the term "oil cooling system" to a system "in which in which the original equipment
4 manufacturer (OEM) engine-mounted liquid-to-oil heat exchanger is replaced with an [sic]
5 non-OEM air-to-liquid heat exchanger." However, there is no basis for this violation of the
6 cardinal rule of claim construction. The language of claim 1 does not support limiting the
7 claim to an oil cooling system "in which the original equipment manufacturer (OEM)
8 engine-mounted liquid-to-oil heat exchanger is replaced with a non-OEM air-to-liquid heat
9 exchanger." Nowhere in claim 1 do the words "a non-OEM air-to-liquid heat exchanger"
10 even appear. Neither the specification nor the prosecution history includes an expression of
11 manifest exclusion or restriction demonstrating an intent to limit "an oil cooling system" to
12 one in which "the original equipment manufacturer (OEM) engine-mounted liquid-to-oil heat
13 exchanger is replaced with *a non-OEM* air-to-liquid heat exchanger." The specification
14 contains no "clear statements of scope" limiting the term "oil cooling system" to an oil
15 cooling system in which the "original equipment manufacturer (OEM) engine-mounted
16 liquid-to-oil heat exchanger is replaced with *a non-OEM* air-to-liquid heat exchanger."
17 Accordingly, it would be error to import these limitations in violation of the cardinal rule of
18 claim interpretation. *Teleflex* 299 F.3d at 1313.

19 Not only do Defendants invite error by importing limitations into the claims,
20 Defendants have not even provided an interpretation of "non-OEM." Consequently, even
21 though the claim elements are clear as-drafted, Defendants' suggested "construction" would
22 import an ambiguous term into the claims,⁸ thereby rendering these claim elements

24 ⁸ For example, does non-OEM mean not made by Ford Motor Company, not made by a Ford
25 supplier, not made to Ford specifications or something else? Where in the patent
26 specification would a third party go to find a meaning for this term?

1 ambiguous and potentially invalid under 35 U.S.C. § 112. Such a result is always to be
2 avoided in claim construction. *See Nazomi Communications, Inc. v. Arm Holdings, PLC*,
3 403 F.3d 1364, 1368 (Fed. Cir. 2005), *citing Turrill v. Mich. S. & N. Ind. R.R.*, 1 Wall. 491,
4 68 U.S. 491, 510, 17 L.Ed. 668 (1863) (patents are to be construed if possible so as to uphold
5 their validity).

6 Finally, it is clear that Defendants’ purported “construction” does nothing to provide
7 guidance to the jury as to the meaning of patent claim terms that the jury would not
8 otherwise be capable of understanding, which is the sole purpose of claim construction.
9 *Sulzer Textile A.G. v. Picanol N.V.*, 358 F.3d 1356, 1366 (Fed. Cir. 2004). Indeed, if
10 Defendants’ proposed construction is stripped of the improperly imported limitations,
11 Defendants’ construction becomes simply “a system for cooling oil,” which does nothing to
12 explain what those terms mean. This is not surprising since the terms are not highly (or even
13 modestly) technical and therefore require no clarifying construction. The meaning of the
14 claim term “an oil cooling system” would easily be understood by one of ordinary skill in the
15 art (or even a layperson) and therefore requires no construction.

16 2. “a manifold having a housing”

17 Plaintiffs’ Construction	Defendants’ Construction
18 (1) No construction needed; 19 (2) Plain and ordinary meaning (<i>i.e.</i> , a 20 manifold having a physical structure that 21 comprises the elements listed in the claim).	“a structure <u>mounted on the engine block</u> <u>in the location of and as a replacement</u> <u>for the removed OEM liquid-to-liquid</u> <u>heat exchanger containing a first and</u> <u>second channel for oil flow, a channel for</u> <u>coolant flow, and channel openings to</u> <u>allow oil and coolant to enter and exit”</u>

22
23 The term “a manifold having a housing” needs no construction because it has no
24 peculiar meaning in the art. *Phillips*, 415 F.3d at 1314 (holding that construction of certain
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1 terms “involves little more than the application of the widely accepted meaning of
2 commonly understood words”). A “manifold” is widely understood to be a solid structure
3 with passageways and this meaning is consistent with how the word is used in the patent.

4 To the extent the Court believes this claim term requires construction, Plaintiffs
5 propose that this term be construed according to its ordinary meaning as understood by a
6 person of skill in the art. A person of ordinary skill in the art would understand the term “a
7 manifold having a housing” to mean simply that the manifold has a physical structure, with
8 the additional features recited in the rest of the claim element:

9 a manifold having a housing, said housing having an oil inlet port for receiving
10 a flow of oil from the engine oil supply outlet, the housing further comprising
11 an oil outlet port, the housing being sized and shaped to match the mounting
12 configuration of the original equipment liquid-to-liquid heat exchanger, the
13 housing further being configured to position said oil inlet port in a horizontal
14 plane adjacent the engine oil supply outlet of the engine block at the location of
the oil inlet of the original equipment liquid-to-liquid heat exchanger whereby
the manifold is capable of receiving the flow of oil from the engine oil pump
without leakage.

15 (Exhibit A, Col. 6, ll. 16-28)

16 The terms “housing” and “manifold” are used interchangeably throughout the patent.
17 (See Exhibit A, Col. 2, l. 54).

18 Defendants’ proposed construction invites the Court to commit error by importing
19 numerous limitations from the specification into the claim. Defendants improperly seek to
20 limit the term “manifold having a housing” to a structure that must be “mounted on the
21 engine block in the location of and as a replacement for the removed OEM liquid-to-liquid
22 heat exchanger and containing a first and second channel for oil flow, a channel for coolant
23 flow, and channel openings to allow oil and coolant to enter and exit.” There is, however, no
24 basis for this violation of the “cardinal rule” of claim construction. The language of claim 1
25 does not support limiting the claim to a manifold that is “mounted on the engine block in the

location of and as a replacement for the removed OEM liquid-to-liquid heat exchanger.”
Nowhere in claim 1 do the words “mounted on the engine block in the location of and as a replacement for the removed OEM liquid-to-liquid heat exchanger” even appear.

Neither the specification nor the prosecution history includes an expression of manifest exclusion or restriction demonstrating an intent to limit the “manifold” to one that is “mounted to the engine block.” The term “manifold” is not defined in the specification and, although the specification describes only one embodiment of the manifold, the specification contains no “clear statements of scope” limiting the term “manifold” to a manifold that is mounted on the engine block. Furthermore, the ordinary meaning of the word “manifold” is not limited to a manifold mounted to an engine block. Accordingly, it would be error to import Defendants’ proposed limitations. *Teleflex* 299 F.3d at 1313.

Finally, the primary purpose of claim construction is to clarify a term’s meaning for a lay jury. *AFG Indus., Inc. v. Cardinal IG Co.*, 239 F.3d 1239, 1247 (Fed. Cir. 2001). Defendants’ purported construction does not explain the meaning of “a manifold having a housing” in any meaningful way. Plaintiffs submit that a juror who has trouble understanding the term “a manifold having a housing” will only be further confused by Defendants’ references to “OEM liquid-to-liquid heat exchanger,” “first and second channel for oil flow,” “channel for coolant flow,” and “channel openings to allow oil and coolant to enter and exit.”

3. “a 6.0L VT365 diesel engine”

Plaintiffs’ Construction	Defendants’ Construction
Agree with Defendants	“a 6.0 L International® VT365 diesel engine also known as the 6.0 L Ford® Powerstroke diesel engine”

1 Plaintiffs agree with Defendants’ construction, which is the plain and ordinary
2 meaning of the term “a 6.0L VT365 diesel engine.”

3 4. “an engine oil supply outlet located in a horizontal plane”

4 Plaintiffs’ Construction	Defendants’ Construction
5 (1) No construction needed; 6 (2) Plain and ordinary meaning, (<i>i.e.</i> , the 7 original engine oil supply outlet to the oil 8 cooler that is standard on a VT365 engine).	“an opening <u>in the engine block</u> through which oil from the engine is passed <u>to the</u> <u>oil cooling system that is</u> located in a plane parallel to the ground surface over which a vehicle travels”

9 This term is self-evident and does not require construction because it has no peculiar
10 meaning in the art. *Phillips*, 415 F.3d at 1314 (holding that construction of certain terms
11 “involves little more than the application of the widely accepted meaning of commonly
12 understood words”). At the time of the invention a layperson would understand the meaning
13 of “an engine oil supply outlet located in a horizontal plane.”

14 If the Court believes this claim requires construction, Plaintiffs submit that this term
15 should be given its ordinary and customary meaning when read in context of the patent,
16 namely, “the original engine oil supply outlet to the oil cooler that is standard on a VT365
17 engine.”

18 The invention comprises “an oil cooling system for 6.0 L VT365 diesel engine having
19 an engine block with an engine oil supply inlet, an engine coolant water outlet, an engine oil
20 supply outlet located in a horizontal plane, an oil pump, and a water cooling system with a
21 water.” (Exhibit A, Col. 1, Preamble to Claim 1) The invention is intended for a VT365
22 Engine having features inherent to that engine, such as an engine block, a water pump, an oil
23 pump, and an engine oil supply outlet located in a plane horizontal to the ground when the
24 vehicle is in its normal upright orientation. In context of the patent, the invention is designed
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1 for use with a VT365 Engine, which has as standard features an engine oil supply outlet
2 located in a plane parallel to the ground with the vehicle in its normal upright orientation.

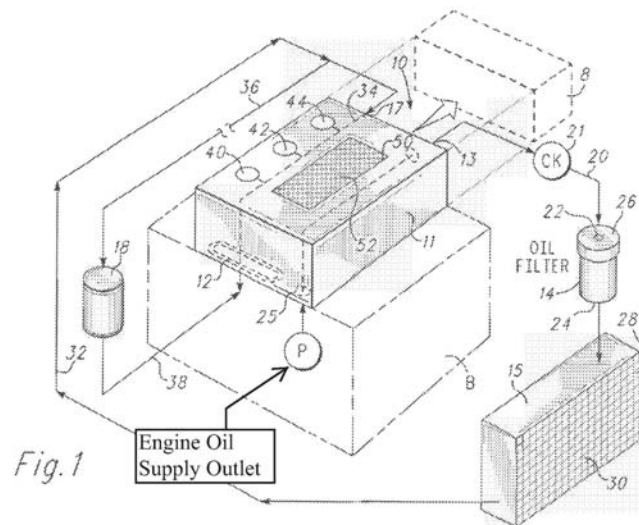


Figure 1 of the '917 Patent.

13 Defendants' proposed construction invites the Court to commit error by importing
14 numerous limitations from the specification into the claim. First, Defendants want the Court
15 to require that the engine oil supply be from an opening "in the engine block." Second,
16 Defendants want the Court to require that the oil pass from the engine block directly to the
17 oil cooling system. Third, Defendants want the Court to hold that the entire oil cooling
18 system (as opposed to the engine oil supply outlet) be located in a horizontal plane.
19 However, there is no basis for these violations of the cardinal rule of claim construction. The
20 language of claim 1 does not support limiting the claim to an engine oil supply outlet that is
21 in the engine block. Nowhere in claim 1 do the words "an engine oil supply outlet *in the*
22 *engine block*" appear.⁹ Neither the specification nor the prosecution history includes an

24 ⁹ Furthermore, one of ordinary skill in the art would recognize that the VT365 engine oil
25 supply outlet is in the oil cooler housing, not the engine block. This is an inherent feature of
26 the engine for which the invention is intended.

1 expression of manifest exclusion or restriction demonstrating an intent to limit the “engine
2 oil supply outlet” to one that is “in the engine block.” The specification contains no “clear
3 statements of scope” limiting the term “oil supply outlet” to an opening in the engine block.
4 Furthermore, the ordinary meaning of the word “outlet” can be an opening anywhere, not
5 just in an engine block. Therefore, it would be error to import Defendants’ proposed
6 limitations. *Teleflex* 299 F.3d at 1313.

7 Plaintiffs urge the court to reject Defendants’ claim construction and either find that
8 this term does not require construction or adopt the plain and ordinary meaning set forth by
9 Plaintiffs above.

10 5. “located in a horizontal plane”

Plaintiffs’ Construction	Defendants’ Construction
(1) No construction needed; (2) Plain and ordinary meaning, (<i>i.e.</i> , located in a plane parallel to the ground with the vehicle in its normal upright orientation).	“located in a plane parallel to the ground”

16 This term is self-evident and does not require construction because it has no peculiar
17 meaning in the art. *Phillips*, 415 F.3d at 1314.

18 The invention is intended for a VT365 Engine having features inherent to that engine,
19 including an engine oil supply outlet consisting of an opening in a surface that is horizontal
20 to the ground when the vehicle is in its normal upright orientation. Therefore, the oil inlet
21 port is in a horizontal plane (oil flows vertically) relative to the vehicle in its normal upright
22 orientation, as shown in Fig. 1 of the ‘917 Patent reproduced above at page 23.

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1 be aided by Defendants’ references to “which is removed to accommodate the manifold” or
2 “whose heat transfer role is performed by a non-OEM air-to-liquid heat exchanger.”

3 If the Court believes this claim term requires construction, Plaintiffs propose that the
4 claim be construed in accordance with its plain meaning: “A heat exchanger (oil cooler) of
5 the type supplied as original equipment in a motor vehicle, specifically, a heat exchanger that
6 transfers heat contained in a heated liquid (oil) to another liquid (engine coolant).”

7 7. “an oil inlet port for receiving a flow of oil from the engine oil supply
8 outlet”

9 Plaintiffs’ Construction	Defendants’ Construction
10 (1) No construction required; 11 (2) Plain and ordinary meaning (<i>i.e.</i> , an 12 opening in the manifold for receiving a flow of 13 oil from the engine oil supply outlet).	“an opening in the manifold for receiving a flow of oil <u>into the first channel for oil</u> <u>flow directly</u> from the engine oil supply outlet <u>with no structure between the</u> <u>manifold and the engine oil supply</u> <u>outlet”</u>

14 There is nothing intellectually challenging about this phrase. The phrase is self-
15 evident and does not require construction. It has no peculiar meaning in the art. *Phillips*,
16 415 F.3d at 1314. Plaintiffs believe a layperson would not have difficulty understanding
17 what the phrase means and therefore would not need the court to provide a clarifying
18 interpretation.

19 If, however, the Court believes this phrase requires interpretation, Plaintiffs propose
20 the phrase be construed in accordance with its plain and ordinary meaning, namely, an
21 opening in the manifold for receiving a flow of oil from the engine oil supply outlet.

22 Again, Defendants’ proposed construction invites the Court to commit error by
23 importing extraneous narrowing limitations. Defendants suggest first importing the
24 limitation that the inlet port receives the flow of oil “*directly* from the engine oil supply
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1 outlet” and second that there is “no structure between the manifold and the engine oil supply
2 outlet.” These limitations are not required by the claim language, are not required by “an
3 expression of manifest exclusion,” are not required by a peculiar definition expressed in the
4 specification or prosecution history, or otherwise.

5 With regard to Defendants’ attempt to import the limitation “directly” into the claim,
6 the claim language simply uses the phrase “receiving a flow of oil.” The claim does not use
7 the phrase “receiving a flow of oil *directly*.” It may be presumed that the author of the ‘917
8 Patent understood the difference between the meaning of receiving an oil flow and receiving
9 an oil flow “directly” since the word “directly” appears in a similar claim element as applied
10 to a flow of water.¹⁰ It would defy all logic to read the word “directly” into this claim
11 element (where the word does not appear) when in another other claim element the word
12 “directly” appears and is used in its ordinary sense. *See, e.g., Vitronics*, 90 F.3d at 1582 (the
13 claims themselves provide substantial guidance as to the meaning of particular claim terms);
14 *see also ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003) (“the context
15 of the surrounding words of the claim also must be considered in determining the ordinary
16 and customary meaning of those terms”).

17 The word “directly” was intentionally omitted from this claim element and, therefore,
18 should not be read into the claim in violation of the cardinal rule of claim construction.

19 Finally, it is clear that Defendants’ purported “construction” does nothing to provide
20 guidance to the jury as to the meaning of patent claim terms that the jury would not
21 otherwise be capable of understanding, which is the sole purpose of claim construction.

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24 ¹⁰ *See* claim term 17 on page 44, “...conveys the entirety of the flow of water exiting the
25 engine from the engine water coolant outlet *directly* back into to the water cooling system of
the engine...” (emphasis added).

1 *Sulzer Textile A.G. v. Picanol N.V.*, 358 F.3d 1356, 1366 (Fed. Cir. 2004). Indeed, if
2 Defendants’ proposed construction is stripped of the improperly imported limitations,
3 Defendants’ construction becomes simply “an opening in the manifold for receiving a flow
4 of oil from the engine oil supply outlet,” which is consistent with the plain meaning of the
5 claim term “an oil inlet port for receiving a flow of oil from the engine oil supply outlet.”
6 This is not surprising since terms such as “inlet port,” “flow of oil,” and “oil supply outlet”
7 are not highly (or even modestly) technical terms and therefore require no explanation.
8 Moreover, even Defendants’ construction tacitly admits the terms are not used
9 idiosyncratically (e.g. a “port” is an “opening”). The absence of any meaningful clarifying
10 explanations of any “highly technical or idiosyncratic claim terms” in Defendants’ proposed
11 construction demonstrates that claims are easily understandable and belies Defendants’
12 position that the claims require construction at all, let alone a construction that imports
13 improper limitations.

14 8. “oil outlet port”

15 Plaintiffs’ Construction	Defendants’ Construction
16 (1) No construction required; 17 (2) Plain and ordinary meaning (<i>i.e.</i> , the 18 housing has an oil outlet port).	“an opening in the manifold for discharging a flow of oil <u>from the first</u> <u>channel for oil flow</u> ”

19 The term “oil outlet port” requires no construction. A person of ordinary skill in the
20 art would understand the term “oil outlet port,” when read in context with the claim (“the
21 housing further comprising an oil outlet port”), to mean that the housing has an oil outlet
22 port.

23 Defendants’ proposed construction invites the Court to commit error by importing
24 limitations from the specification into the claim. Defendants seek to limit the term “oil
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outlet port” to an oil outlet port that discharges a flow of oil “from the first channel for oil flow.” This is an impermissible limitation. The term “oil outlet port” is not a highly technical or idiosyncratic term that requires construction at all, let alone a construction that imports improper limitations.

9. “configured to position said oil inlet port in a horizontal plane adjacent the engine oil supply outlet of the engine block at the location of the oil inlet of the original equipment liquid-to-liquid heat exchanger”

Plaintiffs’ Construction	Defendants’ Construction
(1) No construction required; (2) Plain and ordinary meaning (<i>i.e.</i> , the manifold is configured to position the oil inlet port in a horizontal plane adjacent the engine oil supply outlet of the engine block at the location of the oil inlet of the original equipment liquid-to-liquid heat exchanger whereby the manifold is capable of receiving the flow of oil from the engine oil pump).	“configured to position the manifold oil inlet port (i) where the oil inlet port of the <u>replaced original equipment liquid-to-liquid heat exchanger was located before removal</u> and (ii) <u>directly above and in direct physical contact with the engine oil supply outlet of the engine block</u> ”

No construction is required. This claim language is not highly-technical, nor is it used idiosyncratically. The phrases “oil inlet port,” “horizontal plane,” “oil supply outlet,” “original equipment liquid-to-liquid heat exchanger,” etc. all mean exactly what you would expect them to mean.

If the Court believes this phrase requires interpretation, however, Plaintiffs propose that this term be construed in context and according to its ordinary meaning as understood by a person of skill in the art at the time of the patent’s filing, namely, that: the manifold is configured so that when installed, the oil inlet port of the manifold is in the same position as the oil inlet port of the original equipment oil cooler; the manifold seals against the engine so that the oil flows into the housing rather than leaking out of the engine; and the oil inlet port is in a horizontal plane relative to the vehicle as shown in Fig. 1 of the ‘917 Patent (pg. 23).

1 Defendants improperly seek to import the limitation “directly above” from the
2 specification, and apparently seek to redefine the word “adjacent,” which is commonly
3 understood to mean “near but not necessarily touching,”¹¹ so that “adjacent” now means “in
4 direct physical contact with.” The claim language, however, is easily understandable, and
5 *nowhere* in the specification does the patent make an unequivocal assertion that “adjacent”
6 means “in direct physical contact with,” as is necessary to import a special definition that
7 differs from the ordinary meaning of the word “adjacent.” *See Phillips*, 415 F.3d at 1316.
8 Defendants’ purported construction simply invites the Court to commit error by adding
9 extraneous limitations and definitions that defy logic without adding any clarifying
10 explanations that would assist a juror in understanding the meaning of the claims. It is
11 highly doubtful that a juror who had difficulty understanding the meaning of “configured to
12 position said oil inlet port,” or “adjacent the engine oil supply outlet,” or “at the location of
13 the oil inlet of the original equipment liquid-to-liquid heat exchanger” would be aided by
14 Defendants’ reference to “directly above and in direct physical contact with the engine oil
15 supply outlet of the engine block.” Again, if stripped of the extraneous limitations,
16 Defendants’ proposed construction simply becomes “configured to position the manifold oil
17 inlet port where the oil inlet port of the original equipment liquid-to- liquid heat exchanger
18 was,” which belies Defendants’ position that this claim language was beyond the ability of a
19 lay juror to understand and, therefore, required interpretation.

20 Plaintiffs urge the court to reject Defendants’ claim construction and either find that
21 this term does not require construction or adopt the plain and ordinary meaning set forth by
22 Plaintiffs above.

24 ¹¹ *See, e.g., Centennial Molding, LLC v. Carlson*, 401 F.Supp.2d 985, 991 (D. Neb. 2005)
25 (plain and ordinary meaning of “adjacent” is: “close to; lying near; near or close to but not
26 necessarily touching.”)

10. “capable of receiving the flow of oil from the engine oil pump without leakage”

Plaintiffs’ Construction	Defendants’ Construction
(1) No construction required; (2) Plain and ordinary meaning when read in context (<i>i.e.</i> , the manifold is configured so that, when installed, the manifold seals against the engine so that the oil flows into the manifold rather than leaking out of the engine).	“capable, <u>as a result of being mounted directly onto the engine block in the place of the removed original equipment liquid-to-liquid heat exchanger</u> , of receiving the flow of oil <u>directly</u> from the engine <u>oil supply outlet of the engine block</u> without leakage”

Again, no construction is required. This claim language is not highly-technical, nor is it used idiosyncratically. A lay juror would easily understand what it means for something to be “capable of receiving the flow of oil from the engine oil pump without leakage.”

If the Court believes this phrase requires interpretation, Plaintiffs propose that this term be construed in context and according to its ordinary meaning as understood by a person of skill in the art at the time of the patent’s filing. The manifold is configured so that, when installed, the oil inlet port of the housing is in the same position of the oil inlet port of the original equipment oil cooler. The manifold seals against the engine so that the oil flows into the housing rather than leaking out of the engine.

Defendants are asking this Court to commit the same error that resulted in the District Court being reversed in *Teleflex*. Defendants seek to import limitations that require (1) the lack of oil leakage be “as a result of being mounted directly onto the engine block in the place of the removed original equipment liquid-to-liquid heat exchanger” and (2) receiving the flow of oil “directly” from the engine “oil supply outlet of the engine block.” These limitations are not required by the claim language, are not required by “an expression of

manifest exclusion,” and are not required by a peculiar definition expressed in the specification or prosecution history or otherwise.

Again, Defendants’ proposed construction is devoid of any clarifying explanations. If stripped of the extraneous limitations, Defendants’ proposed construction simply becomes “capable of receiving the flow of oil from the engine without leakage,” which is almost a verbatim parroting of the claim language, thus belying Defendants’ position that any of these words require interpretation.

Plaintiffs urge the court to reject Defendants’ claim construction and either find that this term does not require construction or adopt the plain and ordinary meaning set forth by Plaintiffs above.

11. “a first oil filter receiving a flow of oil from the outlet port of the manifold”

Plaintiffs’ Construction	Defendants’ Construction
(1) No construction required; (2) Plain and ordinary meaning (<i>i.e.</i> , there is an oil filter; the oil flows first through the manifold/housing and then into an oil filter).	“an oil filter which receives oil <u>directly</u> from the oil outlet port of the manifold and discharges filtered oil to an <u>air-to-liquid heat exchanger</u> ”

This claim term requires no construction. There is nothing ambiguous or highly-technical that would prevent a juror from understanding the meaning of “a first oil filter receiving a flow of oil from the outlet port of the manifold.” To the extent any construction is required, this claim element should be construed according to its ordinary meaning as understood by a person of skill in the art at the time of the patent’s filing. Such a person would understand this claim to mean that “oil flows from the outlet port of the manifold and then to an oil filter.”

1 Defendants seek to import limitations that require the oil filter receive the oil
2 “directly” from the oil outlet port of the manifold and then discharge filtered oil to an air-to-
3 liquid heat exchanger. Not only does this violate the cardinal rule of claim interpretation, it
4 is in direct *contradiction* to the patent specification, which clearly shows in Fig. 1 that the oil
5 pathway leads from the outlet port (13) of the manifold, *through the anti-siphon check valve*
6 (21) and then to the oil filter. Thus, the oil filter receives oil directly from the anti-siphon
7 check valve (via hydraulic line 20), not directly from the outlet port of the manifold.

8 Plaintiffs urge the court to reject Defendants’ claim construction and either find that
9 this term does not require construction or adopt the plain and ordinary meaning set forth by
10 Plaintiffs above.

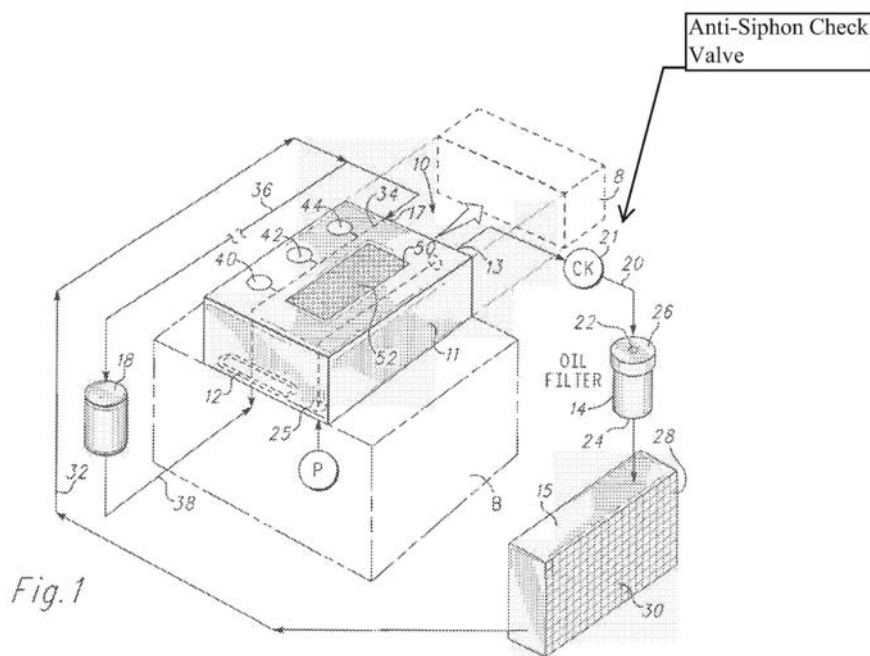


Figure 1 of the '917 Patent.

23 As noted previously, it may be presumed that the author of the '917 Patent understood
24 the difference between the meaning of receiving a flow of oil and receiving a flow of oil
25 “directly.” The word “directly” does not appear in this claim element but does appear in a
26

1 similar claim element as applied to a flow of water. It would defy logic to read the word
2 “directly” into this claim element, where the word does not appear, when in another claim
3 element the word “directly” appears and is used in its ordinary sense. *See e.g., Vitronics*, 90
4 F.3d at 1582 (the claims themselves provide substantial guidance as to the meaning of
5 particular claim terms), *see also ACTV*, 346 F.3d at 1088 (“the context of the surrounding
6 words of the claim also must be considered in determining the ordinary and customary
7 meaning of those terms”).

8 Here, the word “directly” was intentionally omitted from this claim element because
9 the flow of oil is received *from the anti-siphon check valve* and not *directly* from the oil
10 outlet port of the manifold. Therefore, the word “directly” should not be read into the claim
11 in violation of the cardinal rule of claim construction. As before, Defendants’ proposed
12 construction is devoid of any clarifying explanations. If Defendants’ proposed construction
13 is stripped of the improperly imported limitations, Defendants’ construction becomes simply
14 “an oil filter which receives oil from the oil outlet port of the manifold.” This is almost a
15 verbatim recitation of the claim language, thus belying Defendants’ position that any of these
16 words require interpretation. The absence of any meaningful clarifying explanations of any
17 “highly technical or idiosyncratic claim terms” demonstrates that Defendants are not seeking
18 claim term clarification, but instead to add limitations to claims that are easily
19 understandable.

20 Additionally, the language requiring that the oil filter “discharge[] filtered oil to an
21 air-to-liquid heat exchanger” is an improper limitation that is not required by the claim
22 language, is not required by “an expression of manifest exclusion,” and is not required by a
23 peculiar definition expressed in the specification or prosecution history or otherwise. It
24 would be error to import this limitation into the claim.

1 Plaintiffs urge the court to reject Defendants’ claim construction and either find that
2 this term does not require construction or adopt the plain and ordinary meaning set forth by
3 Plaintiffs above.

4 12. “an air-to-liquid heat exchanger having heat exchanger elements
5 positioned in an airflow”

6 Plaintiffs’ Construction	Defendants’ Construction
7 An air-to-liquid heat exchanger is a heat 8 exchanger that transfers heat contained in a 9 heated liquid to the air. The heat exchanger 10 has heat exchanger elements (boundary walls) 11 that transfer heat to the air when the heat exchanger is positioned in an airflow.	“a <u>non-OEM</u> structure for transferring heat from oil to air <u>which replaces the</u> <u>OEM liquid-to-liquid heat exchanger</u> having cooling elements positioned in an airflow <u>wherein air entering the vehicle</u> <u>flows through the elements.”</u>

12 Plaintiffs submit that a person of ordinary skill in the art would understand that an air-
13 to-liquid heat exchanger is a heat exchanger that transfers heat contained in a heated liquid to
14 the air. (Exhibit H) A person of ordinary skill in the art would also understand that such a
15 heat exchanger works better if it is positioned in an airflow (that is why most vehicles have
16 an engine-cooling fan).¹² Finally, a person of ordinary skill in the art would understand that
17 the heat exchanger elements that transfer heat from the fluid to the air can take on a variety
18 of forms depending on whether the heat exchanger is a tube-and-fin or parallel-plate
19 construction, but in general, the heat exchanger elements at least include the boundary walls
20 that separate the hot liquid from the cooling airflow, otherwise the fluid will leak out of the
21 heat exchanger.

22 Defendants’ proposed construction improperly imports numerous limitations from the
23 specification into the claim. Defendants suggest importing the limitations that the air-to-

25 ¹² See page 4 of Section II.

1 liquid heat exchanger must be a *non-OEM* structure, that air must *enter the vehicle*, and that
2 air must flow *through* the heat exchanger elements. These limitations are not required by the
3 claim language, are not required by “an expression of manifest exclusion,” are not required
4 by a peculiar definition expressed in the specification or prosecution history, or otherwise.
5 Additionally, Defendants’ proposed constructions contradict the patent specification itself.

6 Defendants’ suggestion that the air must flow *through* the heat exchanger is in direct
7 contradiction to the patent specification, which provides that:

8 The air-to-liquid heat exchanger may be a *tube or plate design* and is
9 preferably of the tube type having a tube 28 carrying the oil to be cooled which
10 extends in serpentine fashion within the heat exchanger housing.

11 [Exhibit A, Col. 3, ll. 30-32 (emphasis added)]

12 As discussed previously in the technical background, a tube-and-fin heat exchanger
13 has heat exchanger elements that include the tubes and cooling fins through which air can
14 flow. A parallel-plate heat exchanger, however, has no fins for air to flow through. Instead,
15 it has heat exchanger elements consisting of barrier walls that prevent the fluids from mixing
16 and/or leaking out of the heat exchanger. Because the patent specification clearly recites that
17 a *plate design* heat exchanger is within the contemplation of the invention, it would
18 contradict the specification to import the limitation that the air must flow *through* the heat
19 exchanger elements. It would also do violence to the plain language of this claim element,
20 which clearly states that the oil is cooled by air flowing *past* (not through) the heat exchanger
21 elements. Air does not have to flow through the heat exchanger elements. All that is
22 required is that the heat exchanger elements (whatever form they take) transfer heat to the air
23 when the heat exchanger is positioned in an airflow.

24 With regard to Defendants’ suggestion that the air must enter the vehicle, Defendants
25 again attempt to import an ambiguous term in violation of the *Nazomi* rule. Do Defendants
26

1 mean air entering the vehicle cabin or some other part of the vehicle? To one of ordinary
2 skill in the art “air entering the vehicle” means entering the vehicle cabin. If this is the
3 meaning intended by Defendants, then it is contrary to the specification, which clearly
4 contemplates that the air-to-liquid heat exchanger is mounted immediately adjacent to and in
5 front of the radiator. (Exhibit A, Col. 3, ll. 36-39) If entering the cabin it is not the meaning
6 intended by Defendants, then what meaning did Defendants intend since Defendants
7 provided no clarifying explanation?

8 Finally, with regard to Defendants’ notion that the air-to-liquid heat exchanger must
9 be a “*non-OEM*” structure, as noted above, not only would Defendants’ purported
10 “construction” violate the cardinal rule of claim construction, but importing an undefined,
11 ambiguous term such as “non-OEM” would violate the *Nazomi* rule that claims should be
12 interpreted if possible so as to preserve their validity.

13 Defendants’ purported constructions also do nothing to clarify the meaning of “an air-
14 to-liquid heat exchanger having heat exchanger elements positioned in an airflow.” It is
15 doubtful that a juror who had difficulty understanding the meaning of “an air-to-liquid heat
16 exchanger having heat exchanger elements positioned in an airflow” would be aided by
17 Defendants’ references to a “non-OEM, “ “which replaces the OEM liquid-to-liquid heat
18 exchanger,” and “wherein air entering the vehicle flows through the elements.”

19 Plaintiffs urge the court to reject Defendants’ claim construction and adopt the
20 meaning set forth by Plaintiffs above.

13. “receiving a flow of oil from said manifold”

Plaintiffs’ Construction	Defendants’ Construction
(1) No construction needed; (2) Plain and ordinary meaning (<i>i.e.</i> , hot oil flows from the manifold/housing to the heat exchanger).	“receiving a flow of oil from <u>the first channel for oil flow of the manifold</u> ”

This term is self-evident and does not require construction because it has no peculiar meaning in the art. *Phillips*, 415 F.3d at 1314 (holding that construction of certain terms “involves little more than the application of the widely accepted meaning of commonly understood words”). A layperson would understand what it means for something to be “receiving a flow of oil from said manifold”

To the extent a construction is needed, when read in context with the rest of the claim, “receiving a flow of oil from said manifold” refers to an “air-to-liquid heat exchanger receiving a flow of oil from said manifold and cooling the oil by transferring heat to air flowing past the air-to-liquid heat exchanger...” (Exhibit A, Col. 6, ll. 33-35) The term “receiving a flow of oil from said manifold” is entitled to its plain and ordinary meaning. A person of ordinary skill in the art would understand an air-to-liquid heat exchanger “receiving a flow of oil from said manifold” as hot oil flowing from the manifold to the heat exchanger.

A primary purpose of claim construction is to clarify a term’s meaning for a lay jury. *AFG Indus., Inc. v. Cardinal IG Co.*, 239 F.3d 1239, 1247 (Fed. Cir. 2001). Defendants’ construction does not clarify this claim element. Instead, Defendants add extraneous limitations in violation of the cardinal rule of claim constructions and add the ambiguous term “from the first channel for oil flow.”

1 Plaintiffs urge the court to reject Defendants' claim construction and either find that
2 this term does not require construction or adopt the plain and ordinary meaning set forth by
3 Plaintiffs above.

4 14. "cooling the oil by transferring heat to air flowing past the air-to-liquid
5 heat exchanger"

6 Plaintiffs' Construction	Defendants' Construction
7 (1) No construction needed; 8 (2) Plain and ordinary meaning (<i>i.e.</i> , the air-to- 9 liquid heat exchanger transfers heat to the air 10 flowing past the heat exchanger).	"cooling the oil by transferring heat from the oil flowing through oil flow channels in the heat exchanger adjacent the cooling elements to the air flowing through the cooling elements"

11 A person of ordinary skill in the art would understand that an air-to-liquid heat
12 exchanger cools a liquid such as hot engine oil by transferring heat to the air flowing past the
13 heat exchanger. Therefore, no construction is needed.

14 Defendants suggest improperly importing the limitations (a) that the oil must be
15 flowing through oil flow channels in the heat exchanger *adjacent to cooling elements* and (b)
16 that the air must flow *through* the cooling elements. In addition to violating the cardinal rule
17 of claim construction, the notion that the air must flow *through* the heat exchanger is in
18 direct contradiction to the patent specification, which provides that:

19 The air-to-liquid heat exchanger may be a *tube or plate design* and is
20 preferably of the tube type having a tube 28 carrying the oil to be cooled which
extends in serpentine fashion within the heat exchanger housing.

21 [Exhibit A, Col. 3, ll. 30-32 (emphasis added)]

22 As noted above at page 4, a tube-and-fin heat exchanger has heat exchanger elements
23 including tubes and cooling fins through which air can flow. A parallel-plate heat
24 exchanger, however, has no such fins. Instead, it has heat exchanger elements consisting of
25 barrier walls that prevent the fluids from mixing and/or leaking out of the heat exchanger.

1 Because the patent specification clearly recites that a *plate design* heat exchanger is within
2 the contemplation of the invention, it would contradict the specification to import the
3 limitation that the air must flow *through* the heat exchanger elements. It would also do
4 violence to the plain language of this claim element, which states that the oil is cooled by air
5 flowing *past* (not through) the heat exchanger elements. Similarly, nothing in the claim
6 language suggests that the heat exchanger elements are *adjacent* anything, let alone adjacent
7 to the oil flow channels.

8 Once again, Defendants have gone far beyond the proper scope of claim construction.
9 *Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (“[A]
10 particular embodiment appearing in the written description may not be read into a claim
11 when the claim language is broader than the embodiment.”); *Teleflex, Inc. v. Ficosa North*
12 *America Corp.*, 299 F.3d 1313, 1328 (Fed. Cir. 2002) (“We have cautioned against limiting
13 the claimed invention to preferred embodiments or specific examples in the specification”);
14 *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988) (“Although
15 the specification may aid the court in interpreting the meaning of disputed language in the
16 claims, particular embodiments and examples appearing in the specification will not
17 generally be read into the claims.”); *Resonate Inc. v. Alteon Websystems, Inc.*, 338 F.3d
18 1360, 1364 (Fed. Cir. 2003) (“[T]he written description is not a substitute for, nor can it be
19 used to rewrite, the chosen claim language... [I]t is important not to import into a claim
20 limitations that are not a part of the claim.”).

21 Defendants’ purported constructions also do nothing to clarify the meaning of
22 “cooling the oil by transferring heat to air flowing past the air-to-liquid heat exchanger.”
23 Stripped of the extraneous limitations, Defendants’ proposed construction becomes simply
24 “cooling the oil by transferring heat to the air flowing ... the cooling elements,” which belies
25 Defendants’ position that any of these words needed interpretation to begin with.

1 Plaintiffs urge the court to reject Defendants’ claim construction and either find that
2 this term does not require construction or adopt the plain and ordinary meaning set forth by
3 Plaintiffs above.

4 15. “a discharge directed to the engine oil supply inlet via a passageway in
5 said manifold”

6 Plaintiffs’ Construction	Defendants’ Construction
7 (1) No construction needed; 8 (2) Plain and ordinary meaning (<i>i.e.</i> , the air-to- 9 liquid heat exchanger discharges oil to the 10 engine oil supply inlet via a passageway in said manifold).	“a channel <u>in the air-to-liquid heat</u> <u>exchanger</u> which returns <u>cooled, filtered</u> oil to <u>the second channel for oil flow in</u> the manifold, which is then returned to the engine oil supply inlet”

11 This claim term requires no construction. Reading this claim element in context, a
12 person of ordinary skill in the art (and even a layperson) would understand the meaning of an
13 air-to-liquid heat exchanger with “a discharge directed to the engine oil supply inlet via a
14 passageway in said manifold.” This simply means that the heat exchanger discharges oil to
15 the engine oil supply inlet via a passageway in the manifold.

16 The claim limitations proposed by Defendants are improper. The limitations are not
17 required by the claim language, are not required by “an expression of manifest exclusion,”
18 and are not required by a peculiar definition expressed in the specification or prosecution
19 history or otherwise. They are nothing more than narrowing limitations imported from the
20 specification in violation of the cardinal rule of claim interpretation. *Electro Medical Sys.,*
21 *S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994)
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16. “an un-branched bypass water passage having a water inlet port and a water outlet port”

Plaintiffs’ Construction	Defendants’ Construction
Plain and ordinary meaning (<i>i.e.</i> , the manifold/housing has a bypass water passage that has a single inlet and a single outlet).	“an un-branched channel for coolant flow located in the manifold and having an inlet and an outlet port”

Plaintiffs and Defendants essentially agree that this claim element should be construed according to its ordinary meaning. A person of ordinary skill in the art would understand a water passage providing an un-branched flow of water to mean that the water passage has a single inlet and a single outlet as opposed to multiple inlets and/or outlets.

Because the water passage of a diesel engine typically has engine coolant (water and antifreeze) flowing throughout, a person of ordinary skill in the art would also understand that a “water passage” and a “coolant passage” are essentially the same thing. Therefore an un-branched bypass water passage is “a water passage with a single inlet for water/coolant and a single outlet for water /coolant.”

This construction also is supported by the specification of the ‘917 Patent (Exhibit A) at Col. 3, ll. 63-65, which states:

Provision is made in the manifold to circulate coolant through the engine cooling system. Coolant enters the manifold at port 55 and exits at port 56.

17. “configured to position the water inlet port adjacent the engine coolant water outlet of the engine block at the location of the water inlet of the original equipment liquid-to-liquid heat exchanger and to position the manifold water outlet port so that water is discharged directly to the water cooling system of the engine”

Plaintiffs’ Construction	Defendants’ Construction
(1) No construction needed; (2) Plain and ordinary meaning (<i>i.e.</i> , the manifold fits the engine so that the water inlet port of the manifold lines up with the corresponding outlet port in the engine. Water entering the manifold from the engine is discharged directly back into the engine water cooling system.).	“configured to position the (i) manifold coolant inlet port adjacent to the engine block engine coolant water outlet where the inlet of the replaced original equipment liquid-to-liquid heat exchanger was located before removal, <u>and (ii) manifold coolant outlet port adjacent to and in physical contact with the EGR cooler”</u>

No construction is required. A person of ordinary skill in the art would understand the meaning of this claim element. To the extent any construction is required at all, Plaintiffs propose the plain and ordinary meaning of this term, namely, that the manifold fits the engine so that the water inlet port of the manifold lines up with the corresponding outlet port in the engine and water entering the manifold from the engine is discharged directly back into the engine water cooling system.

Defendants attempt to import the limitation that the manifold is *in direct contact with the EGR cooler* and discharges water directly back *to the EGR cooler*. In addition to violating the cardinal rule of claim construction, this construction contradicts the patent specification, which states:

Provision is made in the manifold to circulate coolant through the engine cooling system. Coolant enters the manifold at port 55 and exits at port 56. The coolant is circulated by a water pump through the existing passages in the engine block and radiator.

(Exhibit A, Col. 3, ll. 62-68)

1 The existence of an EGR cooler *is not even mentioned anywhere in the specification.*
2 As made clear above, the coolant exits port 56 and is circulated by the water passages
3 through the engine block and radiator. Moreover, as shown in Fig. 1 of the '917 patent (page
4 23), the manifold is in contact with the engine, not the (unmentioned) EGR cooler.

5 Plaintiffs urge the court to reject Defendants' claim construction and either find that
6 this term does not require construction or adopt the plain and ordinary meaning set forth by
7 Plaintiffs above.

8 18. "whereby the housing receives a flow of water from the engine without
9 leakage and conveys the entirety of the flow of water exiting the engine
10 from the engine water coolant outlet directly back into to the water
11 cooling system of the engine without passing through an oil cooling or
12 water cooling heat exchanger"

13 Plaintiffs' Construction	14 Defendants' Construction
15 (1) No construction needed; 16 (2) Plain and ordinary meaning (<i>i.e.</i> , because 17 the manifold/housing has an unbranched 18 bypass water passage, all of the water entering 19 the manifold through the inlet is conveyed through the outlet directly back to the cooling system of the engine. The water entering the manifold does not pass through a heat exchanger before being returned to the engine cooling system.).	"whereby the manifold structure receives a flow of coolant from the engine <u>block</u> <u>coolant outlet</u> and discharges the water directly back <u>into the EGR cooler</u> without passing through any oil or coolant cooling heat exchanger"

20 A person of ordinary skill in the art would understand the meaning of this claim
21 element. Because the manifold/housing has an unbranched bypass water passage, all of the
22 water entering the manifold through the inlet is conveyed through the outlet directly back to
23 the cooling system of the engine. The water entering the manifold does not pass through a
24 heat exchanger before being returned to the engine cooling system.

Defendants’ seek to import extraneous limitations that are not required by the claim language, are not required by “an expression of manifest exclusion,” and are not required by a peculiar definition expressed in the specification or prosecution history or otherwise. As noted above, nowhere in the patent specification is an EGR cooler even mentioned..

Plaintiffs urge the court to reject Defendants’ claim construction and either find that this term does not require construction or adopt the plain and ordinary meaning set forth by Plaintiffs above.

B. ‘917 Patent Proposed Constructions – Claim 10

1. “a check valve disposed between the oil outlet port of the manifold and the first filter”

Plaintiffs’ Construction	Defendants’ Construction
(1) No construction needed; (2) There is a check valve to prevent reverse flow of oil between the manifold outlet and the oil filter	“a <u>non-OEM temperature-responsive</u> check valve to prevent backflow of oil into the manifold that is disposed between the manifold oil outlet port and the “first oil filter”, <u>with “oil outlet port” and “first oil filter” construed according to the constructions proposed <i>supra</i> with respect to claim 1</u>

No construction is needed. A person of ordinary skill in the art would understand that “a check valve disposed between the oil outlet port of the manifold and the first filter” is nothing more than a check valve to prevent reverse flow of oil between the manifold outlet and the oil filter.

Defendants again violate the cardinal rule of claim construction by inviting the Court to import limitations from the specification into the claims. Defendants suggest importing the term “non-OEM” (and have not even provided an interpretation of “non-OEM.”) Consequently, even though the claim elements are clear as drafted, Defendants’ suggested

1 “construction” would import an ambiguous term into the claims, thereby rendering these
2 claim elements ambiguous and therefore invalid under 35 U.S.C. § 112.

3 A primary purpose of claim construction is to clarify a term’s meaning for a lay jury.
4 *AFG Indus., Inc. v. Cardinal IG Co.*, 239 F.3d 1239, 1247 (Fed. Cir. 2001). Defendants’
5 construction does not clarify this claim element. Instead, Defendants add extraneous and
6 ambiguous limitations, such as “non-OEM temperature-responsive” check valve.

7 Additionally, Defendants have suggested importing limitations *that directly*
8 *contradict the patent specification*. Defendants suggest the court import the limitation that
9 the check valve is “temperature-responsive.” Yet the specification states:

10 “The oil enters the manifold at passageway 25 and flows through the manifold
11 exiting at port 13. Port 13 is connected by a hydraulic line 20 to oil filter 14.
12 Line 20 has *an anti-siphon check valve 21* to prevent reverse flow of oil
through line 20.”

13 (Exhibit A, Col. 3, ll. 12-16; Fig 1)

14 An anti-siphon check valve is *not* temperature-responsive. It simply prevents reverse
15 flow as set forth in the excerpt from the patent specification quoted above, and as shown in
16 the oil flow path depicted below in Fig. 1 of the ‘917 Patent.

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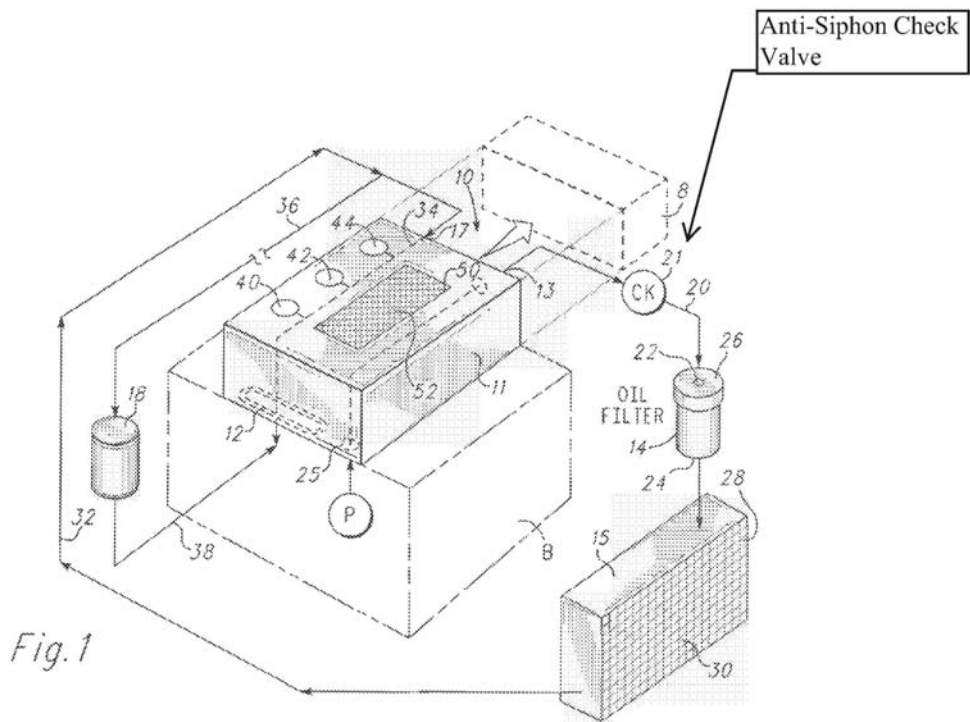


Figure 1 of the '917 Patent.

C. **'512 Patent Proposed Constructions – Claim 1**

1. **“an oil cooling system”**

Plaintiffs' Construction	Defendants' Construction
No construction needed.	“a system for cooling engine oil <u>in which the original equipment manufacturer (OEM) engine-mounted liquid-to-oil heat exchanger is replaced with a remote oil cooling heat exchanger</u> ”

This is perhaps the best example of the unreasonable scope of Defendants' requested claim constructions. There can be little doubt that a person of ordinary skill in the art would understand “an oil cooling system” to be a system for cooling hot oil. No claim construction is required.

1 It is clear that Defendants’ purported “construction” does nothing to provide guidance
2 to the jury as to the meaning of patent claim terms that the jury would not otherwise be
3 capable of understanding, which is the sole purpose of claim construction. *Sulzer Textile*
4 *A.G. v. Picanol N.V.*, 358 F.3d 1356, 1366 (Fed. Cir. 2004). Rather, Defendants seek to
5 import limitations from the specification into the claims, in violation of the cardinal rule of
6 claim construction. Indeed, if Defendants’ proposed construction is stripped of the
7 improperly imported limitations, Defendants’ construction becomes simply “a system for
8 cooling engine oil,” which does nothing to explain what those terms mean. This is not
9 surprising since the terms are not highly (or even modestly) technical and, therefore, require
10 no explanation or construction.

11 2. “a diesel engine”

12 Plaintiffs’ Construction	Defendants’ Construction
13 No construction needed.	14 “a <u>6.0L International® VT365 diesel</u> 15 <u>engine also known as the 6.0L Ford®</u> <u>Powerstroke diesel engine”</u>

16 This is another good example of the unreasonable scope of Defendants’ requested
17 claim constructions. A layperson would understand the term “a diesel engine” without any
18 guidance from the Court.

19 Once again, Defendants seek to improperly limit the claims in order to avoid
20 infringement. Defendants’ proposed construction violates the cardinal rule of claim
21 construction by importing limitations from the specification into the claims. A person of
22 ordinary skill in the art would understand “a diesel engine” to be any type of diesel engine as
23 opposed to a gasoline engine. Defendants are improperly trying to limit “diesel image” to a
24 specific brand and model of diesel engine. This is highly improper. No construction is
25 needed.

3. “removing the original equipment liquid-to-liquid heat exchanger from the engine block”

Plaintiffs’ Construction	Defendants’ Construction
No construction needed.	“Taking the original equipment liquid-to-liquid heat exchanger <u>completely out of the engine block</u> ”

No construction is needed. A person of ordinary skill in the art (and even a layperson) would understand the step of removing the original heat exchange from the engine block.

Once again, Defendants’ proposed construction violates the cardinal rule of claim construction. Removing a heat exchanger from the engine block is different from removing a heat exchanger out of the block. For example, if the heat exchanger is initially mounted on the engine block as opposed to being initially mounted in the engine block, it can be removed from the engine block without being taken out of the engine block. As another example, a computer peripheral (*i.e.*, a USB mouse or a jump drive) can be removed from a computer without being taken out of a computer. A person of ordinary skill in the art would understand the difference between “removing from” and “taking out of.” No construction is needed.

4. “a manifold”

Plaintiffs’ Construction	Defendants’ Construction
(1) No construction needed. (2) Plain and ordinary meaning (<i>i.e.</i> , a structure with passageways).	“a structure <u>mounted on the engine block in the location of and as a replacement for the removed OEM liquid-to-liquid heat exchanger containing a first and second channel for oil flow, a channel for coolant flow, and channel openings to allow oil and coolant to enter and exit</u> ”

1 No construction is needed for the term “manifold,” which would be clear to a person
2 of ordinary skill in the art (or a lay juror). A manifold is a structure with passageways.

3 For the reasons discussed in Section V.A.2 at page 17, Defendants’ proposed
4 construction violates the cardinal rule of claim construction by importing limitations from
5 the specification into the claims. When read in context, a person of ordinary skill in the art
6 would understand “a manifold” simply to be a structure with passageways in accordance
7 with its ordinary meaning and as described in the patent. Plaintiffs propose that no
8 construction is needed, or that this term be construed according to its plain and ordinary
9 meaning as “a structure with passageways.”

10 5. “an original equipment liquid-to-liquid heat exchanger”

11 Plaintiffs’ Construction	Defendants’ Construction
12 (1) No construction needed; 13 (2) a liquid-to-liquid heat exchanger of the 14 type that was originally supplied with the 15 vehicle.	“an OEM structure for transferring heat from oil to coolant <u>which is removed to</u> <u>accommodate the manifold and whose</u> <u>heat transfer role is performed by a non-</u> <u>OEM remote oil cooling heat exchanger”</u>

16 No construction is needed for this term. A person of ordinary skill in the art would
17 understand the meaning of “original equipment liquid-to-liquid heat exchanger.” To the
18 extent any construction is needed, Plaintiffs propose that this term be construed according to
19 its plain and ordinary meaning. An original equipment liquid-to-liquid heat exchanger is a
20 liquid-to-liquid heat exchanger of the type originally supplied with the vehicle. This would
21 include the heat exchanger that was originally supplied with the vehicle or a replacement
22 meeting the same original equipment manufacturer specifications.

23 For the reasons discussed in Section V.A.6 at page 25, Defendants’ proposed
24 construction violates the cardinal rule of claim construction by inviting the Court to import
25 limitations from the specification into the claims. There is no support for narrowing the

scope of this claim term to require that the original heat exchanger be “removed to accommodate the manifold and whose heat transfer role is performed by a non-OEM air-to-liquid heat exchanger.” Defendants’ proposed construction will not aid a jury, but rather confuse a jury by piling on undefined and unsupported claim limitations. If Defendants’ proposed construction is stripped of the improperly imported limitations, Defendants’ construction becomes simply “an OEM structure for transferring heat from oil to coolant,” which is consistent with the plain meaning of the claim term proposed by Plaintiffs: “an original equipment liquid-to-liquid heat exchanger.”

6. “an engine oil supply outlet located in a horizontal plane”

Plaintiffs’ Construction	Defendants’ Construction
(1) No construction needed; (2) Plain and ordinary meaning (<i>i.e.</i> , an opening in the engine through which oil flows out of the engine. The opening is formed in a surface that is in a plane parallel to the ground as shown in Fig 1 of the ‘512 Patent.).	“an opening <u>in the engine block</u> through which oil from the engine is passed <u>to the oil cooling system</u> that is located in a plane parallel to the ground <u>surface over which a vehicle travels</u> ”

No construction needed. This term is self-evident and does not require construction because it has no peculiar meaning in the art. *Phillips*, 415 F.3d at 1314 (holding that construction of certain terms “involves little more than the application of the widely accepted meaning of commonly understood words”). A layperson would understand what it means for something to be “an engine oil supply outlet located in a horizontal plane.”

For the reasons discussed in Section V.A.4. at page 22, Defendants’ proposed construction violates the cardinal rule of claim construction by importing limitations from the specification into the claims. This term does not require construction since it is part of the preamble, which merely describes the inherent features of certain diesel engines, including the 6.0L and the 6.4L Ford Powerstroke diesel engines (*i.e.*, they have an engine

1 block, a water pump, an oil pump, and an engine oil supply outlet located in a plane
2 horizontal to the ground when the vehicle is in its normal upright orientation).

3 7. “an oil inlet port for receiving a flow of oil from the engine oil supply
4 outlet”

5 Plaintiffs’ Construction	Defendants’ Construction
6 (1) No construction needed; 7 (2) Plain and ordinary meaning (<i>i.e.</i> , when 8 read in context of the patent, the housing has 9 an opening for receiving a flow of oil from the engine oil supply outlet).	“an opening in the manifold for receiving a flow of oil <u>into the first channel for oil</u> <u>flow of the manifold directly</u> from the engine oil supply outlet <u>with no structure</u> <u>between the manifold and the engine oil</u> <u>supply outlet”</u>

10 No construction is needed for these claim terms, which lack any highly-technical
11 terms or words that are used idiosyncratically in contradiction to their ordinary meaning. If
12 the Court disagrees, Plaintiffs propose the plain and ordinary meaning of this phrase, that is,
13 an opening in the manifold/housing for receiving a flow of oil from the engine oil supply
14 outlet.

15 For the reasons discussed in Section V.A.7 at page 26, Defendants’ proposed
16 construction violates the cardinal rule of claim construction by importing limitations from
17 the specification into the claims, including the word “directly,” which is clearly omitted from
18 this claim element, yet used elsewhere in the claim. It may be presumed that the author of
19 the ‘512 Patent understood the difference between the meaning of receiving an oil flow and
20 receiving an oil flow “directly” since the word “directly” appears in a similar claim element
21 as applied to a flow of water. It would defy all logic to read the word “directly” into this
22 claim element (where the word does not appear) when in other claim elements the word
23 “directly” appears and is used in its ordinary sense. *See, e.g., Vitronics*, 90 F.3d at 1582 (the
24 claims themselves provide substantial guidance as to the meaning of particular claim terms);
25

1 *see also ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003) (“the context
2 of the surrounding words of the claim also must be considered in determining the ordinary
3 and customary meaning of those terms”).

4 The word “directly” was intentionally omitted from this claim element and, therefore,
5 should not be read into the claim in violation of the cardinal rule of claim construction. If
6 Defendants’ proposed construction is stripped of the improperly imported limitations,
7 Defendants’ construction becomes simply “an opening in the manifold for receiving a flow
8 of oil from the engine oil supply outlet,” which is consistent with the plain meaning of the
9 claim term “an oil inlet port for receiving a flow of oil from the engine oil supply outlet.”
10 Defendants’ construction lacks any meaningful clarifying explanations of “highly technical
11 or idiosyncratic claim terms,” which demonstrates that the claim language is easily
12 understandable.

13 8. “oil outlet port”

14 Plaintiffs’ Construction	Defendants’ Construction
15 No construction needed.	16 “an opening in the manifold for 17 discharging a flow of oil <u>from the first</u> <u>channel for oil flow</u> ”

18 No construction is needed for these claim terms. There are no highly-technical terms
19 or words that are used idiosyncratically in contradiction to their ordinary meaning.

20 For the reasons discussed in Section V.A.8 at page 28, Defendants’ proposed
21 construction violates the cardinal rule of claim construction by inviting the Court to import
22 limitations from the specification into the claims. When read in context (*i.e.*, the housing
23 further comprising an “oil outlet port”), a person of ordinary skill in the art would understand
24 the claim to mean that the housing has an oil outlet port.

- 1 9. “configured to position said oil inlet port in a horizontal plane adjacent
2 the engine oil supply outlet of the engine block at the location of the oil
3 inlet port of the original equipment liquid-to-liquid heat exchanger”

4 Plaintiffs’ Construction	Defendants’ Construction
5 No construction needed.	6 “configured to position the manifold oil 7 inlet port (i) where the oil inlet port of the 8 replaced original equipment liquid-to- 9 liquid heat exchanger was located before removal and (ii) <u>directly above and in</u> <u>direct physical contact with the engine oil</u> <u>supply outlet of the engine block”</u>

10 No construction is needed for these claim terms, which lack any highly-technical
11 terms or words that are used idiosyncratically in contradiction to their ordinary meaning.

12 For the reasons discussed in Section V.A.9 at page 29, Defendants seek to import the
13 limitation “directly above” in violation of the cardinal rule of claim construction.
14 Defendants also seek to redefine the word “adjacent” to means “in direct physical contact
15 with” instead of its ordinary meaning, “near but not necessarily touching.”

- 16 10. “capable of receiving the flow of oil from the engine oil pump without
17 leakage”

18 Plaintiffs’ Construction	Defendants’ Construction
19 (1) No construction needed; 20 (2) Plain and ordinary meaning (<i>i.e.</i> , when 21 installed, the manifold seals against the engine 22 so that the oil flows into the manifold rather 23 than leaking out of the engine).	“capable, <u>as a result of being mounted</u> <u>directly onto the engine block in the place</u> <u>of the removed original equipment liquid-</u> <u>to-liquid heat exchanger</u> , of receiving the flow of oil <u>directly</u> from the engine oil supply outlet of the engine block without leakage”

24 No construction is needed for these claim terms. There are no highly-technical terms
25 or words that are used idiosyncratically in contradiction to their ordinary meaning.

For the reasons discussed in Section V.A.10 at page 31, Defendants’ purported “construction” should be rejected. Defendants seek to improperly import limitations into a claim element. The plain and ordinary meaning – easily understood by a layperson – is that the manifold is configured so that, when installed, the manifold seals against the engine so that the oil flows into the manifold rather than leaking out of the engine.

11. “a remote oil cooling heat exchanger”

Plaintiffs’ Construction	Defendants’ Construction
(1) No construction needed; (2) Plain and ordinary meaning (<i>i.e.</i> , an oil cooling heat exchanger mounted somewhere away from where the original oil cooler was located).	<u>“a non-OEM structure introduced into the engine which replaces the OEM liquid-to-liquid heat exchanger and which allows for the transferring of heat from oil to another fluid”</u>

No construction is needed for the term “a remote oil cooling heat exchanger.” This term lacks any highly-technical terms or words that are used idiosyncratically in contradiction to their ordinary meaning. A person of ordinary skill in the art would understand “a remote oil cooling heat exchanger” to be an oil cooling heat exchanger (*i.e.*, an oil cooler) that is remote (*i.e.*, mounted somewhere away from where the original oil cooler was located).

Defendants seek to import the limitation “non-OEM” (without defining what that means), the limitation “introduced into the engine,” as well as importing the limitation that the heat exchanger must transfer heat “from oil to another fluid,” all in violation of the cardinal rule of claim construction.

12. “a location distal from the location of the original equipment liquid-to-liquid heat exchanger”

Plaintiffs’ Construction	Defendants’ Construction
Agree with Defendants.	a location away from the location of the original equipment liquid-to-liquid heat exchanger”

13. “[a] passageway in said manifold”

Plaintiffs’ Construction	Defendants’ Construction
No construction needed.	“the <u>second</u> channel <u>for oil flow</u> in the manifold”

This claim element does not need a construction and can be easily understood by a lay juror according to its ordinary meaning. A person of ordinary skill in the art would understand a passageway in the manifold to be just that, a passageway in the manifold.

Defendants seek to import the limitation that there must be a second channel for oil flow, which is a violation of the cardinal rule of claim construction. This term does not need a construction, or that construction should be the plain and ordinary meaning (*i.e.*, a passageway in the manifold).

14. “water passage providing an un-branched flow of water”

Plaintiffs’ Construction	Defendants’ Construction
The water passage in the manifold has a single inlet and a single outlet.	“an un-branched channel for coolant flow located in the manifold”

Plaintiffs and Defendants essentially agree that this claim element should be construed according to its ordinary meaning. A person of ordinary skill in the art would understand a water passage providing an un-branched flow of water to mean that the water

1 passage has a single inlet and a single outlet as opposed to multiple inlets and/or outlets.
2 Plaintiffs (and apparently Defendants) propose that this term be construed according to its
3 ordinary meaning.

4 Because the water passage of a diesel engine typically has engine coolant (water and
5 antifreeze), a person of ordinary skill in the art would understand that a water passage
6 providing and un-branched flow of water is a water passage with a single inlet and single
7 outlet.

8 This construction also is supported by the specification of the ‘512 Patent, Exhibit B,
9 at Col. 3, ll. 63-65, which states:

10 Provision is made in the manifold to circulate coolant through the engine
11 cooling system. Coolant enters the manifold at port 55 and exits at port 56.

12 15. “receiving a flow of oil from said manifold”

13 Plaintiffs’ Construction	Defendants’ Construction
14 (1) No construction needed; 15 (2) Plain and ordinary meaning (<i>i.e.</i> , engine oil 16 circulates through the manifold before it goes 17 to the heat exchanger.)	“receiving a flow of oil from <u>the first</u> <u>channel for oil flow of the manifold</u> ”

18 This claim element does not need a construction and can be easily understood by a lay
19 juror when read in context. When read in context, “receiving a flow of oil from said
20 manifold” refers to the remote heat exchanger, which receives the flow of hot oil from the
21 manifold. The manifold is configured so that, when installed, oil flows from the engine
22 through the manifold to the remote oil cooler.

23 For the reasons discussed in Section V.A.13 at page 38, Defendants’ purported
24 “construction” should be rejected in favor of the plain and ordinary meaning.

16. “configured to position the water inlet port adjacent the engine coolant water outlet of the engine block at the location of the water inlet of the original equipment liquid-to-liquid heat exchanger”

Plaintiffs’ Construction	Defendants’ Construction
Plain and ordinary meaning (<i>i.e.</i> , the manifold fits the engine so that the water inlet port of the manifold lines up with the corresponding water outlet port of the engine).	“configured to position the manifold coolant inlet port adjacent to the engine block engine coolant water outlet where the inlet of the replaced original equipment liquid-to-liquid heat exchanger was located before removal”

Plaintiffs and Defendants essentially agree that this claim element should be construed according to its ordinary meaning. A person of ordinary skill in the art would understand that the manifold fits the engine so that the water inlet port of the manifold lines up with the corresponding water outlet port of the engine where the original oil cooler was located.

D. ‘512 Patent Proposed Constructions – Claim 2

1. “proximal the front end of the vehicle”

Plaintiffs’ Construction	Defendants’ Construction
Nearer to the front of the vehicle than the back.	“toward the front end of the vehicle”

1 **E. ‘512 Patent Proposed Constructions – Claim 9**

- 2 1. “[an] oil filter to receive a flow of oil from the outlet port of the
3 manifold”

4 Plaintiffs’ Construction	Defendants’ Construction
5 (1) No construction needed; 6 (2) Plain and ordinary meaning (<i>i.e.</i> , the oil 7 filter is mounted so that engine oil circulates 8 through the manifold before it goes to the oil filter).	“an oil filter which receives oil <u>directly</u> from the oil outlet port of the manifold first channel for oil flow <u>and discharges</u> <u>filtered oil to the remote oil cooling heat</u> <u>exchanger”</u>

9 This claim term requires no construction. There is nothing ambiguous or highly-
10 technical that would prevent a jury from understanding the meaning of “an oil filter to
11 receive a flow of oil from the outlet port of the manifold.” To the extent any construction is
12 required, this claim element should be construed according to its ordinary meaning as
13 understood by a person of skill in the art at the time of the patent’s filing. Such a person
14 would understand this claim to mean that “the oil filter is mounted so that the engine oil
15 circulates through the manifold before it goes to the oil filter.”

16 Defendants seek to import limitations that require the oil filter receive the oil
17 “*directly*” from the oil outlet port of the manifold and then “*discharge filtered oil*” to the
18 remote oil cooling heat exchanger. Defendants’ proposed constructions violate the cardinal
19 rule of claim interpretation.

20 **VI. CONCLUSION**

21 As can be determined from the foregoing, all of Defendants’ purported
22 “constructions” violate the cardinal rule of claim construction by adding limitations to the
23 claims that are not required by the claim language itself. Defendants have not provided any
24 clarifying explanation of the meaning of any highly technical or idiosyncratic claim terms,
25

1 which is the fundamental purpose of claim construction. *Sulzer*, 358 F.3d 1356, 1366.
2 Instead, Defendants have used this opportunity for the sole purpose of adding extraneous
3 limitations to what are otherwise plain and ordinary words, thereby tacitly acknowledging
4 that the words themselves are clear, unambiguous, and easily understood. This fact is easily
5 demonstrated if Defendants “constructions” are stripped of the improperly imported
6 limitations (underlined above).

7 According to the Federal Circuit, a District Court is not actually required to interpret
8 each and every term of a claim simply because one party asserts that the claim terms require
9 interpretation (often for the purpose of importing extraneous limitations). Instead, the
10 Federal Circuit has held:

11 If the district court considers one issue to be dispositive, the court may cut to
12 the heart of the matter and need not exhaustively discuss all the other issues
13 presented by the parties. District courts have wide latitude in how they conduct
14 the proceedings before them, and there is nothing unique about claim
15 construction that requires the court to proceed according to any particular
16 protocol. As long as the trial court construes the claims to the extent necessary
17 to determine whether the accused device infringes, the court may approach the
18 task in any way that it deems best.

19 *Ballard Medical Products v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1358 (Fed. Cir.
20 2001).

21 Not only is a District Court not *required* to interpret every proffered claim term, the
22 Court is actually *prohibited* from interpreting claim terms beyond the extent necessary to
23 resolve the controversy, because to do so would be to render a prohibited advisory opinion.
24 *Vivid Technologies, Inc., v. American Science & Engineering, Inc.* 200 F.3d 795, 803 (Fed.
25 Cir. 1999); *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997).

26 By stark contrast, Plaintiffs’ claim constructions do not import any limitations from
the specification and, by and large, simply restate the plain language of the claims based on

1 solid support from the specification. Plaintiffs respectfully request that the Court either
2 refrain from construing the claims or adopt the plain and ordinary meanings of the terms as
3 proposed by Plaintiffs and without the limitations Defendants are improperly attempting to
4 import.

5 DATED this 7th day of February, 2014

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14 **CERTIFICATE OF SERVICE**

15 I hereby certify that on February 7, 2014, I caused the
16 foregoing document to be filed electronically with the
17 Clerk of Court through CM/ECF System for filing and
18 transmittal of Notice to the following CM/ECF registrants:

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